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Ignace District Fisheries Management Plan

Resource Inventory and Analysis

Detailed Background
Information



Ministry of
Natural
Resources

Hon. Vincent G. Kerrio
Minister


Mary Mogford
Deputy Minister

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Ignace District Fisheries Management Plan

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RESOURCE INVENTORY AND ANALYSIS

This section is an assessment of the information currently available to the Ignace District. It evaluates the resource, assesses the use of that resource under present conditions and management practices, estimates demand projections, and identifies problems and issues associated with current use. In addition, yields based on present management practices are projected.

section 1.1 users and the resource

1.1.1 USERS

The primary users of the fisheries resource in the Ignace District are anglers, commercial fishermen (both for food and bait) and tourist operators. A significant number of local residents in Ignace District are employed by the tourism and service industries catering to the recreational users of the fisheries resources.

a. anglers

Anglers are the major user of the fisheries resource within the district. This group directs it's efforts primarily at 3 species of sportfish, although other species are taken. The target species are:

Lake Trout	<u>Salvelinus namaycush</u>
Walleye	<u>Stizostedion vitreum</u>
Northern Pike	<u>Esoc lucius</u>

Lake trout are found in small lakes south of Highway 17 in the southwestern portion of the district, in fewer but larger lakes in the west-central area, and a few large lakes in the north-central area of the district (Figure 2). Lake trout is the preferred species of 4% of the non-resident anglers who fish in the Northwestern Region (1980 Provincial Angler Survey, Bedi and

Clifford, 1982). The percentage of resident anglers preferring this species was not determined.

Walleye occur in the majority of lakes in the Ignace District (Figure 3). Walleye are the preferred target species of 55% of Ontario resident and 63% of non-resident anglers fishing in the Northwestern Region (Bedi and Clifford, 1982). Of the fish retained by both resident and non-resident anglers in the Ignace District 69% were walleye (Bedi and Clifford, 1982), showing it to be the primary sportfish target species.

Lakes known to contain northern pike are shown in Figure 4. Although this species appears to be the most widely distributed sportfish species within the district, it is not highly preferred by either resident or non-resident anglers. The 1980 Provincial Anglers Survey (Bedi and Clifford, 1982) indicates northern pike is preferred by 12% of non-resident anglers fishing in the Northwestern Region. The number of resident anglers preferring northern pike was stated to be fewer than 5,000 of 40,200 anglers in the Northwest Region (less than 12.4%).

Other species of sportfish occurring within the District are:

Smallmouth Bass	<u>Micropterus dolomieu</u>
Brook Trout	<u>Salvelinus fontinalis</u>
Rainbow Trout	<u>Salmo gairdneri</u>
Yellow Perch	<u>Perca flavescens</u>
Sauger	<u>Stizostedion canadense</u>
Rock Bass	<u>Ambloplites rupestris</u>

The known distribution of smallmouth bass in the district is shown in Figure 5. This species is occasionally sought by anglers.

Brook trout and rainbow trout occur in the district as a result of stocking programs. Two of three lakes stocked with rainbow trout currently contain rainbow trout. Twelve lakes currently contain brook trout. Most of the fishing effort directed towards

these fish is by local anglers.

Yellow perch, sauger, and rock bass are taken more by accident than by intent. Within the district, yellow perch is probably the most wide-spread of the three.

The 1980 Provincial Angler Survey estimated that approximately 169,000 angler-days were generated by 22,500 anglers fishing in Ignace District. Non-residents comprised 73% of the total number of anglers accounting for 111,000 angler-days (65%). the 6,000 resident anglers (27% of the total) made up the other 59,000 (35%) angler-days.

Summer and fall fishing is dominated by non-local anglers in contrast to winter fishing which is almost exclusively by locals. Spring fishing appears to be a mix of both categories (OMNR,1980).

Winter anglers direct their efforts primarily towards lake trout and brook trout. Lake trout is the principal target of spring fishing whereas walleye and northern pike are the preferred species of summer anglers. Fall fishing is split about equally between trout and non-trout species with fishing pressure being lower than at other times of the year (OMNR, 1980a).

b. commercial fishermen (food)

In the Ignace District, there were 9 lakes licenced in 1985 for commercial (food) fishing. Only one licence was issued for each lake and seven licences were held by non-natives. Five lakes had a year-round licence while three were fall-winter whitefish fisheries and one a summer whitefish fishery. The nine commercially fished lakes are shown in Figure 6 and include:

Barrel Lake	Paguchi Lake
Basket Lake	Sowden Lake
Bell Lake	Sturgeon Lake
Indian Lake	Mameigwess Lake
Lake-of-Bays	

Whitefish (Coregonus clupeaformis) is the primary commercial species with several other species being of secondary importance (eg. yellow perch (Perca flavescens), burbot (Lota lota), suckers (Catostomus commersoni), (Moxostomus macrolepidotum) and cisco (Coregonus artedii)). Lakes known to contain whitefish populations are shown in Figure 7. Quotas are established for whitefish, walleye, northern pike and lake trout. Whitefish is the primary target species and therefore the quotas set on the other species are designed to allow only for incidental catches. All lake trout which cannot be released undamaged can be sold. Previous to modernization all lake trout were to be turned in at the District Office in Ignace. No quotas are set for coarse fish such as burbot, suckers and ciscos.

Over the five year period 1981 - 1985 inclusive, 127,031 kg of fish were commercially harvested, an average of 25,414 kg per year. Of this harvest, 93,708 kg (74%) were whitefish, 25,976 kg (20%) were coarse fish and 7,347 kg (6%) were sportfish species. The total value of this harvest was \$111,156 with whitefish contributing \$94,306 (85%), coarse fish \$4,442 (4%) and sportfish \$12,408 (11%). the average annual value of commercial fish harvested during the 5 year period was \$22,231. The yearly market values for these fish by species from 1960 - 1985 is shown in Table 1. Five year averages of the total catch values over this time period, were as follows:

(1961 - 1965)	\$36,000
(1966 - 1970)	\$44,600
(1971 - 1975)	\$11,200
(1976 - 1980)	\$21,400
(1981 - 1985)	\$22,231

Most of the commercial fish harvest from the district is exported to the U.S. and Europe via fish processing plants in Thunder Bay or Winnipeg. A small amount is sold within the province.

Commercial fishing in this area began in 1895 when the Federal government opened Barrel Lake to commercial fishing. Fishing was

by British subjects and was intended to alleviate the effects of a recession that was occurring (Barr and Dyck, 1979). In 1917 the Ontario government began licencing inland lakes for commercial fish harvesting because of food shortages caused by the war. Indian, Mameigwess, and Basket Lakes were all early licenced lakes and have been fished from the 1920's to the present (Barr and Dyck, 1979); Sturgeon, Penassi, Press; and Lake-of-Bays have been licenced since the 1940's. Historical catch records of commercial fishing in the Ignace District are scattered and incomplete.

Lakes that have been commercially fished in the past include:

Abamategwia (1978)	Press (1970)
Kukukus (1976)	Seseganaga (1971)
Mattawa (1970)	Shikag (1976)
Penassi (1971)	Wapikaimaski (1970)
	Wintering (1980)

The year in brackets indicates the year in which the lake was last commercially fished. These licences were discontinued due to lack of fishing activity or because the lakes were unable to support a commercial fishery.

c. commercial fishermen (bait fish)

The regulations pertaining to bait fish in Ontario, as outlined in the Ontario Fishery Regulations, are as follows:

"bait fish" means any member of the minnow family Cyprinidae, except carp, Cyprinus carpio Linnaeus and goldfish Carrassius auratus (linnaeus), the mudminnow family Umbridae, the sucker family Catostomidae, the stickleback family Gasterosteidae, the trout-perch family Percopsidae, the sculpin family Cottidae, the genus Leucichthys of the whitefish family Coregonidae, and the darter subfamily Etheostomatinae

To protect native fish communities, the Ontario Fishery Regulations state that live bait fish cannot be brought into Ontario.

Licencing and regulations of the harvest and sale of bait fish comes under The Fisheries Act and The Game and Fish Act. The three main bait fish licences issued under the Ontario Fisheries Regulations are: a commercial fishing licence, a bait dealer's licence, and a licence to preserve bait fish. In the past, licencing was on a per gear basis, with a limit on the number of lakes harvested. The present licence system, imposed in 1964, is the "exclusive use block" system which allows a single licensee to harvest bait fish from an area of approximately 259 km² (100 square miles) as designated by base map. There are 44 blocks in the District, and in 1985 43 were licenced (Figured 8). This allocation of mutually exclusive blocks aids in management practices and reduces user conflict over prime fishing areas. Four exceptions to the exclusive use block system are:

1. where a great concentration of bait fish occurs and the area they inhabit cannot be practically divided into lots
2. where a commercial tourist operator cannot supply the bait fish demands through existing bait fishermen and requires a licence to supply his guests
3. where a landowner would like to trap bait fish in public waters surrounded by his land
4. where the present system does not conform to the block system and a change-over period is required.

The Ontario Ministry of Natural Resources feels that the resource should first benefit the people of Ontario (OMNR, 1982) therefore, when a non-resident withdraws from the industry, the licence will be re-allocated to a resident. Finally, in order to fully utilize a resource which is in high demand, and which can often fall short of supply in late July and August, a licensee

that fails to produce bait on his/her licence will be refused a licence renewal and the area will be allotted to another individual. In 1985 there were 13 licence holders fishing 43 blocks.

In accordance with the second exception of the block system, when a licence is issued to a commercial tourist operator to fish in a block already allocated, a restriction is imposed on this licence as follows:

"Bait fish taken under the authority of this licence is for sale only to registered guests of the camp."

One of the requirements of the bait fish licence is for the holder to submit an annual return indicating amounts of fish caught and sold by species and income derived from these sources.

All bait fishermen and bait dealers have dealer licences allowing them to possess, transport and sell live bait fish. In 1985, there were 27 licenced dealers in addition to the 13 fishermen. Dealers usually have other commercial enterprises and use the sale of bait fish as a customer service gaining little or no profit from the operation (Hildebrand - Young and Associates, 1981). Bait fishermen usually dispose of their harvest by wholesaling to dealers, camps and lodges, or through retail sales directly to sport fishermen.

Although district bait fish reports show a general increase in the harvest of bait fish since 1977, the number sold and the value of those sold has not changed greatly over that period. The reasons behind this can only be speculated on. Between 1973 and 1976, harvest, numbers sold, and value, stayed relatively constant, but somewhat lower than the period from 1977 to the present (Table 2). Prior to 1973, records are incomplete.

d. tourist operators

The Ministry of Tourism and Recreation indicates that in 1985,

there were 42 licenced tourist establishments in the Ignace District, catering to the Sports Fishing Market. A breakdown of the type of accommodation available shows that 29 are main base operations offering a mixture of housekeeping and/or american plan cottages, campsites and 12 outposts, 5 offer campgrounds only and 8 are fly-in lodges. There are 12 out-of-district main base operation with 17 outposts and 5 air carriers having 20 outposts located in the district.

The majority of these facilities are summer-only operations. The season length each year fluctuates due to factors such as weather, and forest fire conditions as well as the length of the hunting and fishing seasons as set by regulations.

The major concentrations of tourist operations are on Sturgeon Lake, Seseganaga Lake, and Shikag Lake with lesser concentrations in the southwest corner of the district (Figure 9). Outposts are scattered throughout most of the district.

In 1935 the first commercial tourist operation in the Ignace District was started on Mameigwess Lake. Raven Lake and Raleigh Lake were operating by the late 1940's, starting with the opening of the Trans-Canada Highway. Sturgeon Lake had 8 tourist camps by the early 1950's when Highway 599 provided access to the lake. The majority of other camps were established between 1968 and 1975 (OMNR, 1980).

The information provided by the Ministry of Tourism and Recreation, Dryden, indicated an annual average gross income of \$77,000.00. Projecting this to the 42 establishments whose main business is fishing and hunting clientele, the estimated gross revenue would be \$3,234,000.00.

This does not include any additional, incidental spending done by these people.

e. native people

The use of the fishery resource by native people in the district is minimal. There are no reserves within the district and only two commercial fishing licences are held by native fishermen.

f. viewers

Viewer areas in the Ignace District would be limited to spawning yellow walleye areas. There are a few locations along the main highway within 4 to 6 km of Ignace which may draw people to view spawning fish.

g. dipnet fisheries

The Ignace District has a dipnet fishery for spring suckers and a very limited fall dipnet fishery for whitefish. There are three whitefish dipping areas most commonly licenced: Little Indian Chute, the Hut River and Elbow Creek (Figure 10). Approximately 25-50 people apply for licences each year. Sucker dipping is unregulated and would occur primarily at roads crossing streams close to the town of Ignace.

h. others

Other user groups within the district include research and local clubs. Deerhide and Fawn Lakes were netted for lake trout, northern pike and suckers as part of an age-growth study initiated by Fisheries Research Branch, Maple, in 1982.

There is one organized conservation club in the district; the Ignace District Fish and Game Conservation Club. As the club is relatively new, it has not yet become involved in organized activities related to fisheries.

Further information on these user groups is provided in Section 1.2 (Resource Use and Projections) of this report.

The major road network of the district (Figure 11) is useful in

determining accessibility of the lakes and streams used. Highway 17 cuts through the southern portion of the district. Highway 599 runs northeast from Ignace Township. These 2 highways along with the various timber and mine roads leading from them, provide ready access to a large number of lakes.

Airports and float plane bases also are shown in Figure 11. This, taken in conjunction with Figure 9 (Commercial Lodges and Outposts), gives some indication of the areas of heaviest angling pressure within this district. Angling pressure would be greatest in road accessible lakes. Highway 599 provides access to Sturgeon Lake where the major concentration of tourism establishments is located, and to the English River. Indian lake receives heavy fishing pressure from local resident anglers. Press lake has a maintained access road which increased use of this lake. Highway 17 provides access to tourist establishments on several smaller lakes along its route. Secondary roads access most of the remaining camps. Air access is important in outpost and outlying tourism areas.

1.1.2 THE RESOURCE

A general description of the climate and the terrain characteristics of the district along with an analysis of the lakes, rivers and streams and the fisheries potential of these waters are provided in this section.

a. physiography

(i) Climate

Ignace District covers an area of 11,500 square kilometers lying at the westerly edge of the Height of Land Climatic Region of Northern Ontario (Chapman and Thomas, 1968). Small portions of the district also extend into the English River and Rainy River - Thunder Bay Climatic Regions to the west. The climatic classification of this area is modified continental with the modification originating mainly from the proximity of large water bodies such as Hudson Bay, Lake Superior and Lake Winnipeg.

The mean annual temperature of this Region is 1°C with a mean annual minimum of -43°C. Mean daily temperatures in January range from a minimum of -24°C to a maximum of -10°C and in July from 10°C to 24°C.

Precipitation in this climatic region is greater than in the other climatic regions in Northern Ontario with a mean annual rate of 76 cm., a mean rate from May to September of 38 cm. and mean annual snowfall of 241 cm. (95 inches).

The frost-free period of the Region extends from June 15 to September 2, providing about 80 frost-free days on average. The growing season extends from the beginning of May (May 5 average) to mid October (October 13 average) providing an average of 162 growing days.

The data provided above apply to the whole climatic region and may be misleading when applied specifically to the Ignace District. The height of Land Region extends eastwards almost to Timiskaming and North Bay while the district lies on the extreme western boundary and, as stated earlier, in fact overlaps to a small degree into the English River and Rainy River - Thunder Bay Regions. For this reason, comparative numbers for these 2 Regions are listed below:

	<u>English River</u>	<u>Rainy River - Thunder Bay</u>
Mean annual temperature	1°C	2°C
Mean annual minimum temp.	-40°C	-40°C
January mean daily temp		
- maximum	-14°C	-10°C
- minimum	-24°C	-22°C
July mean daily temp.		

- maximum	25 [°] C	26 [°] C
- minimum	13 [°] C	12 [°] C
Precipitation		
- annual mean	64 cm	66 cm
- May - September mean	38 cm	38 cm
- snowfall mean	204 cm	191 cm
Frost-Free Period		
	May 30 - Sept. 15 (108 days)	May 31 - Sept. 12 (104 days)
Growing Season		
	May 03 - Oct. 13 (164 days)	April 26 - Oct. 17 (175 days)

(Data from West patricia Planning Area table adapted from Brown McKay and Chapman)

(ii) Bedrock

The characteristic bedrock of the Superior Structural Province of the Precambrian Shield in which Ignace District lies is a pink granite. This basic rock type is broken, in some areas, by bands of greenstone (ancient volcanic and sedimentary deposits) covering about 20% of the district. Erosion of sediments covering these foundation rocks have exposed them in some areas of the northern part of the district.

(iii) Surficial Geology

Glacial deposits are a prominent surficial feature of the district. Four types of glacial deposits occur in the area. The most extensive is ground moraine; sandy material including large quantities of stone and gravel. End or interlobate moraines are composed of similar types of material but are much thicker deposits and not very extensive in this district. The other two types of glacial deposits are glaciofluvial and glaciolacustrine deposits, both created in conjunction with water action.

Glaciofluvial deposits are characterized by eskers (long, narrow ridges) and kames (conical hills). The typical material of these formations is sand and gravel. They mark areas of ancient glacial river action. Glaciolacustrine deposits are primarily clay or fine sand in lowlands left in areas of glacial lakes. In this district, there is one small area on the extreme western boundary and one area near Metionga Lake (eastern boundary) where these occur. The Bonheur River Kame located in the south east, has been recommended for park status as a significant earth science feature.

The last type of deposit contributing to the surficial make-up of the district is Aeolian deposits. This is very fine sand and silt deposited by wind action.

(iv) Watersheds

Two primary watershed divisions occur in the Ignace District: the Hudson Bay Drainage Basin and the Lake Winnipeg Drainage Basin. the Lake Winnipeg Basin covers most of the district with only the northeast corner fallin in the Hudson Bay Basin. Two secondary divisions, (English River Drainage System and Lake of the Woods Drainage System) occur in the Lake Winnipeg Basin (Figure 12). the natural waterflow of the Hudson Bay Basin is northeast into Hudson or James Bay. The Ogoki Diversion, completed in 1943, diverted the natural flow of the Brightsands River System from the Hudson Bay Basin into Lake Nipigon via the Allanwater System and Ogoki River.

These watersheds are broken down still further into tertiary and quaternary (fourth level) watersheds. Ignace District has four tertiary watersheds either wholly or partially within its boundaries. These are composed of 19 fourth level watersheds. The code numbers and names of these 19 divisions are listed below:

4GB	Ogoki Diversion (tertiary)	
4BG02	Flindt River	(quaternary)
4GB03	Allanwater River	"
4GB04	Brightsands River	"
5PB	Middle Rainy River Basin	
5PB09	Stormy Creek	
5PB10	Turtle River	
5PB12	Wabageisi Creek	
5PB13	Kinmoapiku Creek	
5PB14	Balmoral River	
5PB17	Little Turtle River	
5QA	Upper English River	
5QA01	Marchington river	
5QA02	Kukukus Creel	
5QA03	Amik River	
5QA04	English River	
5QA05	Osaquan River	
5QA06	Gulliver River	
5QA07	Megikons River	
5QA08	Upper English - Petry - Scotch Rivers	
5QA09	Sturgeon River	
5QD	Wabigoon River	
5QD01	Wabigoon River	

Information on area and number of lakes at the quaternary watershed level is provided in Table 3.

Almost one fifth of the district is water-covered with water quality rated as good to excellent. Because of this, water-based activities are important to the economy of the district.

There are small regulating dams located on Agimak, McNamara, and Sturgeon Lakes which control water levels. There are no major dams (eg. hydro-electric) forming reservoirs. The Ogoki Diversion has no known effect on the district.

(v) Soils and Topography

Soils, generally, are sandy across the whole of the district with some peat deposits in the south and an area of silt on the western boundary. One area of organic soil also occurs on the western boundary. The soil depth varies considerably with the deepest soils occurring in the central part of the district. Shallow, or bare areas, are not very extensive and are scattered.

Topographical features of the district vary from low hills to gently rolling plains to small areas of flat land. The hillier areas occur in the west and around Sturgeon lake. The plains and hilly sections are about equal in area. The flat land occurs in scattered pockets and covers approximately 5% of the district.

Maps showing geographical, topographical and soil features are available in the Ignace District Land Use Plan Background Information report.

Information on climate, geology, topography, and soils was obtained from the Ignace District Land Use Plan Background Information (OMNR, 1980) and from OMNR file data derived from The Climate of Northern Ontario (Chapman and Thomas, 1968).

Watershed information was obtained from Counts and Measurements of Ontario Lakes (Cox, 1978).

(vi) Influence of Physiography on Fish Yield (Summary) Climate plays a key role in fish yield by regulating the amount of energy available. In the Ignace District, the climatic effect on fish yield is represented by the constant 1.4 in the yield equation Y , yield (kg/ha/yr) = $1.4 \text{ MEI}^{0.45}$. The Ogoki Diversion once flowed into the Hudson-James Bay drainage basin for which, according to one source, the yield equation is $Y = 0.7 \text{ MEI}^{0.45}$ (OMNR, 1981). for the purposes of this report, however, the yield for entire district is calculated using the equation $Y = 1.4 \text{ MEI}^{0.45}$.

The surficial geology, a result of glacial activity, is an important factor in fish yield in that it determined the shape of lakes. Here the denominator, mean depth, comes in to play where

in simple terms deeper lakes tend to be less productive than shallower lakes.

The chemical composition of lake waters is known to reflect the type of bedrock and soluble geological substrate of the watershed through which the waters drain from or are contained within. The greater the input of biologically essential chemicals, such as carbonates, the greater the potential for biological productivity (Carlander, 1955). Thus, lakes with low productivity would be found within granitic bedrock basins or would drain areas of sand and gravel, while lakes containing or surrounded by lacustrine clay and silt deposits usually have relatively higher biological productivity. Lakes in the area covered by ground moraine consisting of silty to sandy till would have a low to medium productivity, depending on the other components of the till.

Greenstone belts are located in the Sturgeon Lake area where copper/lead/zinc and iron ore mines are located. Actual mining is limited to the south end of Sturgeon Lake but increased exploration activity at the north end may develop into new mines. The secondary influence of tailings on the water quality could pose fishery management problems for the lake.

b. fisheries potential

Ignace District lakes vary in size from small ponds of less than one hectare in area to Sturgeon Lake at over 21,000 hectares. This section provides information on lakes in the district over 10 hectares in size. These lakes were grouped into four classifications which were further divided into coldwater or warmwater groupings. Two of the classifications are surveyed lakes and partially surveyed lakes. Coldwater lakes usually are lakes containing salmonid species (eg. trout). In general, coldwater lakes tend to be clear, deep lakes with low productivity. Warmwater lakes have no salmonids. Known coldwater lakes are shown in Figure 13 and known warmwater lakes in Figure 14. The third and fourth classifications are unsurveyed lakes known to be coldwater or warmwater and

unsurveyed lakes for which there is no information available to designate them as either coldwater or warmwater. These classes of lakes were assigned a productivity by species based on an extrapolation from surveyed lakes. The four classes are discussed separately.

(i) Surveyed Lakes

Surveyed lakes are lakes for which complete lake surveys have been done. Information on these lakes is tabulated in Tables 4 and 5. Table 4 lists the surveyed lakes sorted by watershed and Table 5 lists the same lakes sorted by warmwater and coldwater. There are a total of 216 surveyed lakes. There are 63 of these designated as coldwater lakes, and 153 designated as warmwater lakes.

Potential yield is the theoretical quantity of fish flesh which can be removed from a waterbody without causing alterations in fish community structure. Changes in structure would be a change in the proportion or quantity of species. For lakes without sufficient harvest data to determine actual yield, a fish yield estimator based on Ryder's morphoedaphic index (MEI) (Ryder, 1965) has been used.

The metric form of the revised yield equation for the Winnipeg-Nelson and Hudson Bay watersheds is $Y = 1.4 (MEI)^{0.45}$ (OMNR, 1982) where Y is yield in kg/ha/yr and MEI is, in its simplest form, the ration of total dissolved solids ppm (TDS) and mean depth m (Z). This equation has been revised in this document from the old yield equation $Y = 1.24 (MEI)^{0.5}$. The TDS equation has also undergone revision. The most recent formula, which has been used in this document is $TDS =$

$$\frac{\text{Specific Conductivity}}{1 + (0.02 (\text{Cell Temp}^{\circ}\text{C} - 25))} \times 0.666$$

The formula relates the conductivity and the temperature, as

measured during the lake survey, to provide an estimate of the dissolved solids in the water. Multiplying the yield (kg/ha/yr) by the area of the lake in question yields an estimate of the total annual potential fish yield of the lake in kilograms per year (kg/yr).

Surveyed lakes were partitioned by potential yield for brook trout, lake trout, lake whitefish, walleye, northern pike, smallmouth bass and largemouth bass, muskellunge and yellow perch. The partitioning was based on a methodology developed by SPOF Working Group Number Twelve and revised at the regional level to accommodate district variations. Where muskellunge occurred along with northern pike, the northern pike partitioning was allocated to both species. No attempt was made to individually quantify these species where they coexist. Similarly, where basses occurred, the maximum allocation was the smallmouth bass partitioning. Where totals of the species partitioning exceeded 100%, there was a proportional decrease of the species partitioning down to 100%.

The accepted partitioning is as follows:

<u>Species</u>	<u>Fort</u>					<u>Sioux</u>
	<u>Kenora</u>	<u>Dryden</u>	<u>Frances</u>	<u>Ignace</u>	<u>Red Lake</u>	<u>Lookout</u>
Lake Trout	25	25	25	25	25	25
Lake Whitefish	24	24	24	24	24	24
Walleye	32	32	32	32	32	32
Northern Pike	25	25	25	25	25	25
SM Bass	35	35	35	17	17	17
LM Bass	17	17	17	17	17	17
Yellow Perch	13	13	13	13	13	13
Muskellunge	10	10	10	10	10	10
Muskellunge and Northern Pike	25	25	25	25	25	25
SM Bass and LM Bass	35	35	35	17	17	17

The reader should note that although smallmouth bass and yellow perch are partitioned, bass do very poorly in Ignace District and yellow perch are not considered a target species but rather a nuisance fish.

Coldwater lakes have lower potential yields than warmwater lakes. Coldwater lakes generally have a lower TDS and are often deeper lakes, resulting in lower MEI values from which the yields are calculated.

A memorandum dated 1982.08.04 provided the convention which was to be used for lakes crossing district boundaries. Any lake less than 100 hectares surface area was included in the potential yield calculations of the district in which the largest portion of the lake falls. Lakes greater than 100 hectares generally were treated as per the smaller lakes with the occasional exception. These exceptions usually occurred where access to the water body was from the district containing the smaller portion of the lake. Management responsibility and the entire lake area was then attributed to the district containing the smaller portion of the lake.

Several small coldwater lakes containing brook trout and rainbow trout are shown in these tables, but the productivity of these lakes should be viewed in light of the fact that they are artificially maintained, and are directly affected by stocking priorities of the district.

(ii) Partially Surveyed Lakes

Partially surveyed lakes are listed in Tables 6 and 7. Most have been surveyed but are missing some data which are required for yield calculations. There are 5 coldwater lakes and 5 warmwater lakes in the partially surveyed lakes sections. In total, there are 10 lakes partially surveyed.

To arrive at a potential yield estimate for these lakes, an MEI value had to be calculated. This was done separately for each

lake type (warm or cold). The MEI's for all surveyed lakes by warmwater or coldwater categories in the watershed (whether in or out of the district) were weighted by lake area and averaged. The following equation was used for calculating coldwater and warmwater MEI's.

weighted MEI=
$$\frac{MEI_1 \times A_1 + MEI_2 \times A_2 + MEI_3 \times A_3 + \dots + MEI_n \times A_n}{A_1 + A_2 + A_3 + \dots + A_n}$$
 where A is the area of each surveyed lake and n is the number of lakes in the watershed

If there were fewer than three surveyed lakes in the watershed then lakes in the immediately surrounding watersheds were included in the calculations. These values were then used to estimate potential yields. A listing of these calculated MEI's is shown in Table 10.

(iii) Unsurveyed Known Warm or Coldwater lakes
These are lakes that have not been surveyed but are known to be warmwater or coldwater lakes. There are 94 of these lakes in the district. Only two are classed as coldwater. These lakes are listed in Tables 8 and 9.

MEI's and potential yield estimates were calculated using the same method as described for partially surveyed lakes. The known coldwater lake areas and yields were then added to the estimated coldwater areas and yields. Partitioned yields by species were then calculated based on an extrapolation from surveyed lakes as described in the section following on "unsurveyed lakes".

There are, in Ignace district, 70 known coldwater lakes and 250 known warmwater lakes. (Six lakes contain both warm and coldwater sections, but have been classified as coldwater.) There is a total of 320 lakes on which some fisheries information is available. The distribution of these lakes is shown in Figure 13 (known coldwater lakes) and Figure 14 (known warmwater lakes).

(iv) Unsurveyed Lakes

The remaining lakes in the district have no firm data available on them but an estimation of the potential yield was determined. the method used to accomplish this is as follows.

Each lake greater than 10 hectares in area was measured with a polar planimeter on 1:50,000 scale maps. These lakes were counted and their areas totalled for each watershed. The areas were then divided into warmwater and coldwater portions by applying percentages derived from the known water areas of each type in the watershed and from MNR staff opinion. MEI's (Table 10), calculated as previously described, were applied to each of these areas to arrive at a total yield estimate for unsurveyed waters in the District.

Thirteen percent of the unsurveyed lakes area was calculated as coldwater, while the remaining 87% of unsurveyed area was calculated as warmwater. The total resulting yield from unsurveyed lakes assigned to coldwater was added to the unsurveyed lake known to be coldwater for a total yield of 14,163.9 kg/yr. Warmwater yield calculated similarly came to 197,642.6 kg/yr. To quantify target species, an extrapolation was made from community types found in surveyed lakes (Table 23). The percentage occurrence by area of coldwater community type was multiplied by the total yield assigned to unsurveyed coldwater lakes to arrive at a yield (kg/ha) per community type. These were partitioned as with surveyed lakes except restricted to the main community type species. Warmwater lakes were treated similarly.

The total number of lakes over 10 hectares in area and the total area of these lakes by watershed, as well as district totals for each, are shown in Table 3. It should be noted that there are numerous lakes less than 10 hectares in size that are not included in these totals. The above analysis of potential yield by species only considered the preferred target species discussed by the plan. There has not been any work done in the District regarding potential yield of bait fish. The bait fishermen have

generally practiced their own management techniques within their licenced block area. This includes rotation of lakes trapped, and limiting excessive harvest.

c. rivers and streams

Information on rivers and streams is tabulated in Tables 11, 12 and 13. This data was derived using guidelines suggested in a memorandum dated 1982.08.04 and minutes of a Technical Task Force dated 85.03.06. The memorandum directs that all rivers which show as double lines on a map of 1:50,000 scale (not including chain lakes) were to be measured for area. The Task Force recommended yields for rivers and streams to be 5.0 kg/ha/yr for coldwater rivers and 9.7 kg/ha/yr for warmwater rivers.

Lengths of rivers and streams were measured using a map measurer on 1:50,000 scale maps. Width was determined by averaging a minimum of three measurements on these maps. Area was then calculated.

An exception was made to the above guidelines in the case of Groves Creek. This stream is small and does not show as a double line on the maps. The reason for it's inclusion is that it is the only known coldwater stream in the district. Groves Creek was originally stocked with brook trout, but the trout population is now naturally self-sustaining. From a fisheries standpoint, this fact makes it an important stream. Information on Groves Creek is in Table 11.

Warmwater streams and data available on them is listed in Table 12. some of these streams have had surveys done on them and the information is available in district files.

A summation of area and estimated productivity of streams in each watershed and in the Ignace District as a whole is presented in Table 13.

d. underproducing waters

There are no known underproducing waters in the district. The sensitivity of lakes to acidification, where this is known, is shown in Figure 15. No lakes in the district are known to be acidified.

In 1982, three small, coldwater lakes (Beak, Islets and Gustuason Lakes) were classified as winter sanctuaries. their small size, easy accessibility and heavy angling pressure in the past made this action necessary as a protective measure. Beak and Islets Lakes also have other nearby sanctuaries in adjacent districts. This tended to increase the fishing pressure on both these lakes. By classifying them as winter sanctuaries some of the pressure may be alleviated, thus helping to prevent overharvest. In 1984, four other small coldwater lakes (Deerhide, Fawn, George and Flora Lakes) were classified as year-round sanctuaries. This was done to preserve the lakes for research purposes as well as a protective measure against overharvest. The location of all seven of these lakes is shown in Figure 16.

Barrel Lake was closed to commercial fishing from 1972 to 1977 inclusive because mercury levels exceeded 0.5 p.p.m. (the standard established for Canadian markets). The licence was renewed in 1978 when mercury levels in the fish declines.

1.1.3 SUMMARY OF FISHERIES POTENTIAL

The following is a summary of the data in the tables relating to this section.

1)	Total water area	208,551.1 ha*
	- surveyed lakes	139,396.4 ha*
	- partially surveyed lakes	3,492.6 ha*
	- unsurveyed known warm or cldwater lakes	12,534.8 ha*
	- unsurveyed unknown warm or	

* Includes water area falling outside district boundary but managed by Ignace District.

coldwater lakes	49,394.6 ha
- rivers and streams	3,732.7 ha

2) Total potential yield 646,462.4 kg/yr

- surveyed lakes	390,959.8 kg/yr
coldwater	167,333.8 kg/yr
warmwater	223,626.0 kg/yr
- partially surveyed lakes	7,522.4 kg/yr
coldwater	4,786.3 kg/yr
warmwater	2,736.1 kg/yr
-unsurveyed known warm or cold	46,304.7 kg/yr
coldwater	357.9 kg/yr
warmwater	45,946.8 kg/yr
- unsurveyed unknown warm or cold lakes	165,501.8 kg/yr
coldwater (13% by area)	13,806.0 kg/yr
warmwater (87% by area)	151,695.8 kg/yr
- rivers and streams	36,173.7 kg/yr
coldwater	36.5 kg/yr
warmwater	36,137.2 kg/yr

3) Estimated species yields (kg/yr)

- Rainbow Trout	49.1
- Lake trout	40,110.7
- Brook trout	982.9
- Lake whitefish	73,185.4
- Northern pike	143,932.9
- Smallmouth bass	10,009.7
- Walleye	166,199.0
- Yellow perch	49,589.6
- Residual	162.403.1

4) Number of lakes over 10 hectares in district 1,641

Total surface area of lakes over 10 hectares within District boundary 196,044.3 ha

5) Total Length of coldwater streams	2.9 km
6) Total Length of warmwater streams	370.8 km
7) Area of coldwater streams	7.3 ha
8) Area of warmwater streams	3,725.4 ha

- 9) Yield of coldwater streams 36.5 kg/yr
- 10) Yield of warmwater streams 36,137.2 kg/yr

section 1.2 resource use and projections

Demand is a measure of the amount of use that will be made of a commodity under varying conditions of preference, availability, cost relative to income and other variables. The intent of this section is to determine the present demand on the fisheries resource and to make projections based on that demand. To accurately assess the demand requires stringent data input into established demand analysis techniques. However, complete data required for this is not available, so the best that can be achieved is an assessment of harvest, use, or consumption rather than true demand. Projections of future demand although limited in accuracy are attempted for the purposes of this plan. As the data base improves, adjustments can be made to the projections as necessary.

1.2.1 USE

a. commercial fishery (food)

Commercial fishing data for the period 1960 - 1985 is presented in this section. In addition to the 9 lakes listed in Section 1.1 as being licenced in 1985, (Figure 6), 9 others have had licences at some time during that period. Lakes have been discontinued due to lack of fishing activity, economics and the problems associated with harvests of walleye in whitefish fisheries. Lakes no longer licenced are:

Abamategwia Lake	Press Lake
Kukukus Lake	Seseganaga Lake
Mattawa Lake	Shikag Lake
Penassi Lake	Wintering Lake
	Wapikaimaski Lake

Data from commercial fishing records for the 18 lakes licenced between 1960 - 1985 is tabulated in Tables 14-17 and Table 1. A detailed yearly summary of licences for each waterbody, showing

the number and type of licence, the valid period, the species of fish allowed, the quotas if applicable, and the harvest and its value is shown in Table 14. An annual summary of Table 14 is shown in Table 15. The annual harvest and value of all species taken from each lake is shown in Table 16. The species breakdown of the annual harvest (Table 17) and value (Table 1) are also presented.

Information regarding the status of current investment (1985) in commercial fishing is shown in Table 18. This includes new capital investment.

The Ontario Freight Equalization Assistance Program is a subsidy currently available to commercial fishermen which provides monetary assistance to fishermen for transporting coarse fish (sucker, burbot, and ciscos) to markets. The subsidy provides a rebate of \$0.18/kg for these fish from lakes south of latitude 50°00'. Seven of the 9 currently licenced lakes in the district would fit into that category. The two others (Lake-of-Bays and Sturgeon Lake) lie right on the 50°00' parallel but in both cases almost all commercial fishing activity occurs in the northern part of the lake; Lake-of-Bays by licence restrictions and Sturgeon Lake by the choice of the fisherman. For fish taken north of the 50°00' parallel the subsidy program provides a rebate of \$0.20/kg. That rate would apply to these two lakes. Cutter-grade whitefish caught south of latitude 50°30' also qualify for the \$0.20/kg rate.

b. commercial fishery (bait fish)

Information on bait fish licencing and harvest for the period 1960-1985 is presented in Table 2. Data prior to 1973 is limited due to incomplete records. Shown are the number of blocks available and licenced each year, the number and type of licence issued, the number of dealers and fishermen licenced and the harvest and value of bait fish where the information is available. In addition to the bait fish blocks, there are two private ponds used primarily as holding areas for bait fish. Information concerning these is in Table 19.

c. anglers

Much of the pertinent information concerning this group has been detailed in Section 1.1. Data from creel surveys conducted between 1974 and 1982 is tabulated in Table 20. This table provides information on the three major sportfish species as well as the estimated number of anglers and angler pressure.

Table 21 briefly summarizes results from the provincial angler surveys conducted in 1970 and 1980. Comparison between the two surveys is difficult because of variations in methods of collecting and presenting the data. The 1980 survey is much more detailed and of more practical value. There appears to have been a substantial increase in the number of non-resident anglers over the 10 year period and a decrease in resident anglers, but this comparison should be made with caution. Also, because of the differences in methods of gathering the information from residents and non-residents, comparisons between the two groups may be superficial. It should be noted that a design problem with the 1980 angler survey may require the application of a correction factor. At the time of writing, the correction factor was not available.

A comparison of data from creel surveys and commercial fishing records to potential yield estimates from individual district lakes is presented in Table 22. This permits identification of lakes which are, or may be, overharvested. There are 22 lakes listed including the 18 which have supported commercial fishing and 4 others which have had creel surveys done. Six of these lakes are shown to be over-exploited. They are listed below showing the species being overharvested and the type of fishing involved.

<u>Lake</u>	<u>Species</u>	<u>Fishermen</u>
Abamategwia (1978)	Lake whitefish	commercial
Barrel (1983)	Lake whitefish	commercial
Indian (1985)	Lake whitefish	commercial

Little Raleigh (1974)	Lake trout	angler
Mameigwess (1984)	Lake whitefish	commercial
Victoria (1981)	Lake trout	angler

It should be noted that this information is based on the most recent data available. Abamategwia Lake was not licenced for commercial fishing from 1980 to 1985 and no harvest was reported in 1979 so it is possible that it is no longer being overfished. Little Raleigh was creeled in the winter of 1974. No recent information is available to determine whether the situation has improved or deteriorated since then.

Other lakes in the table are listed as "possibly" over-exploited. These are Cecil and Paguchi Lakes.

The figures for Paguchi Lake show that the three-year average harvest for whitefish was slightly lower than the potential yield for that species. The figure used in the table as a three-year average is based on 1985, 1984 and 1983 data as these are the most recent 3 years for which harvests were reported. The 1983 harvest figures were well below productivity estimates. The lake may be over-exploited if 1984 and 1985 information is an indicator.

Whitefish harvest quotas for 7 of the 9 lakes supporting commercial fisheries are actually higher than the potential yield for the lake. For all other species for which data is available, the allowable catch is lower than the potential yield.

1.2.2 PROJECTIONS

Dependable projections derived from proven demand analysis techniques are not possible because of deficiencies in the data base. For the purpose of this plan, however, an attempt is made to arrive at estimates of future requirements in order to allow planning to proceed. It should be stressed that caution should be exercised in using these projections because of their inherent limitations. Existing projections of population, angling, and

both facets of commercial fishing will be stated. The data on which the projections were based will be presented if available. Where necessary, or possible, adjustments to the projections will be suggested.

The Ministry of Treasury and Economics Central Statistics Services does not provide population projections for centres of less than 10,000 people. The most refined population projections available for use for the Ignace District are those produced at the level of Judicial Districts. Ignace straddles the boundary between the Kenora and Thunder Bay Judicial District. As of March, 1983 there were 2,508 people residing in Ignace with approximately 200-400 other permanent residents in the district. Fewer than 4% of these residents are on the Thunder Bay side of the boundary and as that Judicial District includes large population centres such as the city of Thunder Bay, using population projections for that area would probably unduly bias any projections attempted for Ignace. Kenora Judicial District has population centres more similar to Ignace and as the majority of Ignace residents live in the Kenora District, figures for that district are likely to provide a more realistic projection. The available data for Kenora District indicates a rise in population of approximately 5% between 1981 and 2000. Applying that percentage to the current population figure (2,708) produces a projection of 2,840 people by the year 2000 if present circumstances remain unchanged. However, over half of the present work force is employed in mining and forest products industries (OMNR, 1980) and any major change in either industry can be expected to be reflected in the population level. Closure of the Falconbridge mine probably had a significant effect on lowering the population.

The 1980 Provincial Angler Survey estimated that 6,000 resident anglers fished in Ignace District in 1980 for a total of 59,000 angler-days. Based on licence sales information, there were also 16,500 non-residents fishing in the district in 1980 who added 111,000 angler-days (Table 21). Ignace District creel survey data (1978-1982), estimate the average weight per fish by species

at 0.72 kilograms for walleye, 1.58 kilograms for northern pike and 0.86 kilograms for lake trout. Based on the 170,000 angler-days and harvest reported in the 1980 Provincial Angler Survey the total district harvest of sportfishing anglers is 437,240 kilograms.

Projections of these data to the year 2000 are that the present resident angling pressure will remain static and that non-resident participation will increase at a rate of about 1.25% annually (Ward, personal communication). The estimate of increased non-resident pressure is based on a 4.4% annual increase in past licence sales, on estimates of non-resident angler days in the 1970 angler survey (Cox and Straight, 1970) and the 1980 Federal-Provincial Angler Survey. The expected angler effort in the year 2000 is calculated to be about 198,000 angler-days (59,000 resident and 139,000 non-resident).

The demand for sportfish is expected to increase in proportion to effort. It is estimated that there will be an angler demand of 514,535 kilograms by the year 2000.

The Ignace District Land Use Plan states that there are 198,000 hectares of water area in the district with a potential yield of 319,000 kg of sportfish per year. Data presented in the first section of this report (Users and the Resource) suggest a revision of these figures. Water surface area was determined to be 208,551 hectares. This area includes lakes over 10 ha and streams which meet the Fisheries Management Plan guideline criteria for inclusion. The total potential yield for the district using revised methods of calculation is determined to be 646,462 kg/yr. The 646,462 kg of fish produced in the District is comprised of:

walleye	166,199.0
northern pike	143,932.9
lake trout	40,110.7
brook trout	982.9
rainbow trout	49.1

smallmouth bass	10,009.7
whitefish	73,185.4
yellow perch	49,589.6
residual	162,403.1

The known species association occurring in the Ignace District is shown in Table 23 and was used to extrapolate species composition in unsurveyed lakes.

The target sportfish making up walleye, northern pike, lake trout, brook trout, rainbow trout and smallmouth bass total 361,284.3 kg/yr. Of course harvest is not spread out according to available fish yield, but is concentrated where lakes are most accessible.

Tourism may expand by recommendation of the Ignace District Land Use Guidelines (1983) in fifteen lakes:

District land Use <u>Guidelines Area Code</u>	<u>Lake Name</u>
5	Willow Narrows Hook Wabuska
7	Cottle
8	Quill Post Willow Willet Pipie Squaw Empress/King/ Goodman Chain
10	Conver

Handcuff
Paris
, Divided

The expansion would be limited to 4-8 man outpost camps per location.

The Ignace District Land Use Plan suggests a commercial fishery capability of 274,000 kg/yr determined by adding the total productivity of 28 lakes with surface areas greater than 810 ha. Applying the criterion of lakes larger than 810 ha surface area to the lake tables in the first section of this report, there are 24 lakes totally within the district and 15 partially within the district. Six of the 15 boundary lakes have more than half their area in the district. The total productivity of the 30 lakes over 810 ha in the district is 288,000 kg/yr. This total includes only the productivity of the boundary lakes which applies to the Ignace portion of the lake.

The target for commercial fishing assigned to Ignace District is 65,000 kg/yr. It was determined by adding existing quotas and average harvest of fish not on quota. While the target appears to be well within the district's capability, it should be noted that a large part of the 288,000 kg/yr capability will be sportfish production not available to commercial fishermen. The whitefish yield for the 30 lakes over 810 ha where whitefish is present is approximately 69,000 kg/yr. For lakes currently fished the yield is about 61,000. As shown in Table 22, and discussed in the previous section (use, 1.21a), 3 of the 3 lakes currently under licence are already being overharvested for whitefish. The target yield could be maintained by exploiting other lakes not currently used, or by shifting the harvest to fish species other than whitefish.

The present (1985) harvest of bait fish in Ignace is 90,648 dozen. The average annual reported harvest for 1981 - 1985 is 92,827 dozen. The target for bait fish is to meet the demand by anglers by the year 2000. The projected increase in angler-days

suggests that an increase of 17% to about 108,600 dozen bait fish would meet the demand.

Data was not available to allow reasonable projections of age or sex composition of anglers over the next 20 years.

section 1.3 present fisheries management practices

This section summarizes the Ignace District's management practices for the years 1979-1985. Information prior to 1979 may be found on file in the district office.

Total annual fishery expenditure is estimated to be approximately \$66,400. Of that amount, \$29,700 is allocated to enforcement incurred costs and \$36,700 to management and administration costs. An average of 6.60 man-months/year was spent by the three conservation officers on fishery duties other than enforcement. Eight months (January - August) are considered to be the primary fishing months. It is estimated that management personnel (other than C.O.s) spend an additional 11.48 man-months for a total of 18.08 man-months/year of fisheries resource management by permanent staff. Casual personnel provide an estimated 20 additional man-months primarily conducting data collection programs (eg. lake surveys, creel census). Total time spent annually on management alone is 38.08 man-months.

1.3.1 ENFORCEMENT

In 1985 there were 3 full time conservation officers on staff in the Ignace District. It is estimated that these 3 officers spent an average of 11.25 man-months/year on fishery related enforcement. In addition, an estimated average of 4.5 man-months/year of fisheries enforcement was spent by other personnel (eg. Fish and Wildlife Supervisor, Fish and Wildlife Management Officer). The total time spent on strictly fishery related enforcement, is 15.75 man-months annually.

Enforcement incurred costs amount to \$29,700 a year.

1.3.2 HABITAT MANAGEMENT

Habitat management includes habitat inventory and habitat

rehabilitation. Habitat inventory is carried out under the annual lake survey program. Habitat rehabilitation, would include projects designed to improve or protect fisheries habitat.

a. habitat inventory

There are a total of 216 fully surveyed lakes in the district. Another 10 have been partially surveyed. This represents approximately 14% of the district's 1,641 lakes over 10 ha. One hundred and six of these were surveyed between 1979 and 1985. Some of the older surveys should be updated.

The number of people working on lake surveys varies from year to year but cost estimates are approximately \$12,000/year average for lake surveys.

Three streams were surveyed in the district in 1978. Groves Creek, the only coldwater stream in the district and 2 warmwater rivers (English River and Crystal River) were surveyed. Streams listed in Table 12 are in need of surveying.

Spawning areas for walleye, pike, and lake trout are shown in Figures 17, 18, and 19 respectively. None of these appear to be in need of rehabilitation. A survey of lake trout spawning areas in Sturgeon Lake was done in 1979 to identify possible spawning sites. A recommendation followed that a more intensive study be carried out.

b. habitat rehabilitation

Protection of the resource during the process of input into Forest Management Agreements results in Areas of Concern where fisheries needs are taken into account. The following defines the Areas of Concern policy.

Areas of Concern are areas that require particular management prescriptions in order to maintain or improve resource values

such as fish and wildlife habitat, forest genetic resources, scenic areas and other recreational and tourism values.

M.N.R. will identify where modified management will take place, to assist in implementing integrated resource management on Crown Land.

The public will be consulted during the identification of Areas of Concern and the development of their prescriptions.

The Ministry will initially assume that a 120 meter Area of Concern is necessary on all shorelands.

Areas of Concern will be established in other areas as required.

Areas of Concern will include no-cut zones, selective harvest zones, or both, where appropriate, for the protection of all economic, social and recreational resource values.

Categories of Areas of Concern include:

- lake trout lakes and stream tributaries
- warmwater lakes and rivers
- eagle, osprey and heron nesting sites
- wildlife management areas
- canoe routes
- aesthetic modified management areas
- gravel reserve and garbage dumps
- Wabaskang traditional hunting area

(i) Lake Trout Lakes

An area extending 120 meters back from the water's edge of all lakes known to be inhabited by lake trout has been identified as an Area of concern. A 15 meter area of concern has also been established on each side of all tributaries entering into the lake to the first permanent basin or bog.

This border will protect the sensitive fish habitat from the negative impacts of erosion, sedimentation, mechanical damage, excessive nutrient loading or logging debris which could result if unrestricted harvesting to the shore was allowed.

On lake trout lakes the two-zone concept will not apply. A 120 meter no-cut zone of minimal disturbance will be adopted until forest management technology develops to a stage which protects the environmental integrity of these watersheds. Experimental cutting of these areas will be considered on a case by case basis.

A 15 meter no-cut zone will be established on each side of all tributaries entering lake trout lakes up to the first permanent basin or bog.

It may be necessary to modify some aspects of forest management (eg. road locations), throughout the entire watershed which surrounds certain lakes. A narrow buffer strip around a lake may be inadequate. In these cases the modifications will be in conjunction with other area of concern prescriptions.

(ii) Warmwater Lakes and Rivers

Within the agreement area most of the larger warmwater lakes and larger slow-moving rivers are inhabited by fish such as northern pike, walleye, muskellunge, smallmouth bass, whitefish and ciscos. These fish are all popular with anglers and/or commercial fishermen. Some small lakes are important for commercial bait fish production.

A 120 meter area of concern extends back from the shoreline on all warmwater lakes greater than 50 hectares, on those lakes smaller than 50 hectares but known to contain sport fishes, on waterbodies fished commercially for bait fish and on significant rivers and streams.

Generally, warmwater fish communities are much more resilient than coldwater communities as represented by trout species. Moderate or short-term changes in water quality, and increases in the use of these species, can generally be accommodated if critical spawning and nursery habitat is protected. This important habitat is usually found at inlets or outlets; near windswept points and adjacent shorelines; in sheltered embayments; and below rapids or rivers. Removal of standing timber in these areas could result in negative impacts from erosion, sedimentation, blowdown, mechanical damage or logging debris.

Intensive management of shoreland areas is required in order to ensure that critical fish habitat is protected and as a result fish stocks maintained.

Areas of concern on these shorelands will be managed by a two-zoned concept.

The inner zone will extend from the water's edge back a distance of 60 meters. This zone will be considered a zone of minimal disturbance and initially a "no-cut" area. Harvesting may be considered where harvesting plans protect the environmental quality of the lake's watershed.

The outer zone will extend back an additional 60 meters. This area is a zone where harvesting of timber will be encouraged in a manner which protects the sensitive values of the shoreline (eg. aesthetic, environmental, etc.).

No rehabilitation programs are being undertaken in the district at the present time. One small length of stream bank damaged by erosion on Revell River would benefit from some rehabilitative work.

1.3.3 POPULATION MANAGEMENT

Population management includes population assessment, population manipulation, harvest assessment and harvest control. These topics are considered in the following sub-sections.

a. population assessment

Netting studies, creel surveys, commercial fish harvest records, and tagging studies are methods of population assessment used in Ignace District.

Netting studies can be used as a means of judging the feasibility of opening a lake to commercial fishing. Three netting studies have been undertaken for this purpose in the recent past. Two netting studies on stocked lakes were carried out to evaluate the current stocking program. A sixth test netting was done in 1981 in connection with a transplant program in Square Lake and will be discussed under population manipulation.

The 2 netting studies on stocked lakes involved fourteen lakes test netted in 1977 and 1978 to assess the results of rainbow and brook trout stocking. As a result of these studies, a recommendation was made that led to the Shrimp Lake reclamation program. This is dealt with under population manipulation.

Six creel surveys have been conducted between 1979 and 1981 including a winter aerial survey of Sturgeon Lake in January of 1981. The results of these surveys are summarized in Table 20. Creel surveys dating back to 1974 are also shown.

Commercial fishing records provide harvest information. These records are most useful in assessing populations of non-sport species in Ignace District where commercial fisheries are mainly lake whitefish fisheries.

Tagging studies provide information on age and growth of fish populations. One tagging study, initiated in 1977, was

undertaken to examine environmental influences on growth using fish of the same genetic stock. For a variety of reasons, the project was discontinued.

b. population manipulation

Population manipulation techniques are designed to improve desirable fish populations. These techniques include stocking programs, lake reclamation projects, coarse fish removal, and transplant programs.

Between 1981 and 1985, 10 lakes were stocked with 42,900 brook trout. Five were stocked in 1985 with a total of 7,700 fish, 5 in 1984 with a total of 8,800 fish and 7 in 1983 with a total of 7,700 fish. All five of the lakes stocked in 1985 were restockings of the 1983 or 1984 lakes. One lake was stocked with 500 rainbow trout in 1984 and another lake with 1880 rainbow trout in 1983. A list of Ignace District lakes stocked since 1960 is provided in Table 24. This table shows the location of the lakes, the years of stocking and the species. Most of the stocked lakes are "put-delay-take" fisheries although the 1977-1978 test netting programs indicate that some natural reproduction is taking place in several of the lakes tested.

The only reclamation program undertaken recently was Shrimp Lake in 1979. The test netting of 1977 indicated that survival and growth of planted brook trout had deteriorated badly, due to the large population of white suckers in the lake (Marks, 1979). The lake was treated with rotenone to destroy the unwanted species (Corbett, 1979). The lake was then restocked in 1980 with 4,000 brook trout. A follow up to this program will determine the degree of success or failure of the reclamation work.

For the first time, in 1981, 2 permits were issued for coarse fish removal. Both special permits allow netting for white suckers only. One of these was issued for Lake-of-Bays; the other for an unnamed stream flowing into Whitefish Bay of Basket

Lake. All commercial fishermen are permitted to take coarse fish on their licences. Information concerning coarse fish harvest by commercial fishermen is found in Tables 1 and 14-17. Several transplant programs have been undertaken in recent years. In 1978, 28 adult walleye from Sandbar Lake were transplanted into Revell Lake and 36 into Greenheart Lake. Square Lake had 61 walleye transplanted from Indian Lake. Sixteen of the 61 Square Lake walleye were tagged before release. The report on the Square Lake transplant (Marks, 1978) recommends a follow-up test netting of the lake after 4 years to determine the degree of success of the program with a view to possibly carrying out more transplants in other suitable lakes.

c. harvest assessment

Harvest assessment methods include creel surveys, commercial fish returns for both bait and food fisheries, angler surveys and non-resident licencing. These have been covered in some detail in previous sections of this report. Reports from fishermen and tourist operators can also provide useful information concerning the harvest from lakes with which they are familiar.

d. harvest control

Harvest control measures are necessary in order to reduce the vulnerability of fish stocks to overharvesting. Angling regulations set seasons, limits on size and/or numbers allowed, and areas of limited fishing. The major sport species are listed below with the open season and limits for the district.

<u>Species</u>	<u>Season</u>	<u>Limit</u>
Northern Pike	All year	6/day
Walleye (and Sauger)	Third Saturday in May-April 14	6/day (any combination)

Bass	All year	6/day
Lake Trout	Jan. 1-Sept. 30 (Division 22)	3/day
	Feb. 15-March 15 (Division 21)	
	June 1-Sept. 30 (Division 21)	
Brook Trout	Jan. 1-Sept. 15 (Division 21)	7/day
	All year (Division 22)	
Rainbow Trout	All year	5/day
Whitefish	All year	25/day

Three lakes in the district are classed as winter sanctuaries and are closed to fishing from Jan. 1 to May 20. Four other lakes are year round sanctuaries.

Regulations can be upheld by periodic checks by conservation officers or other personnel authorized for enforcement. The checks could be done either by enforcement officers going out to meet fishermen directly on the water or by road checks to which fishermen are required to report.

Fall dipnet fisheries of whitefish are regulated by licencing. Other methods of limiting sportfish harvest include controlled access to particular water bodies which may be in danger of overharvest and public education concerning the necessity of limiting the harvest of fish.

Commercial harvesting is controlled by specifying minimum mesh

sizes allowed for gill-nets and through quotas. Size limits are applicable to some species.

1.3.4 FISHERIES SERVICES

Services provided by fisheries staff include public relations and education, fisheries extension, plan review, and cooperation with other agencies.

Public relations and education involves providing information to the public about the fish resource. Upon request, staff are available for such events as trade or sports shows, and as visitors to sports clubs or schools.

There are 2 private ponds in the district used primarily as bait fish holding areas and as such do not qualify as fisheries extensions. There are no other fisheries extension facilities (eg. private hatcheries).

Plan review is provided as required in order to have accurate fisheries input. This may be within the MNR or in cooperation with other ministries. As an example of this, the Ignace District Land Use Plan was reviewed by fisheries staff prior to completion and release.

Close cooperation is necessary with provincial ministries such as the Ministry of Tourism and Recreation (MTR) and the Ministry of the Environment (MOE) as well as with federal agencies involved with fisheries. The Ministry of the Environment monitors the quality of provincial waters. The information is important in assessing the ability of lakes to maintain their fish stocks or in determining if intervention may be desirable.

The Federal Fish Inspection Service monitors the quality of commercial fish. Mercury levels in the walleye and pike are monitored and parasite levels (specifically Triacnophorus crassus) are checked in whitefish. Whitefish are graded according to parasite infestation rates.

1.3.5 PROVINCIAL FISHING AREAS

There are no provincial fishing areas in Ignace District.

1.3.6 ASSESSMENT UNITS

There are no assessment units present in the Ignace District.
One suggested unit includes Indian Lake as a "type" lake.

1.3.7 FISH CULTURE

At the present time, fish culturing is not being done in the district.

1.3.8 SUMMARY OF FISHERIES MANAGEMENT PRACTICES

A summary of the information presented in this section of the report is presented in the following table.

<u>Summary Statement</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>Average</u>
Enforcement				
- # of man-months fisheries enforcement				15.75
Habitat Management				
- # of lakes surveyed	18	0	6	8.0
Area of lakes surveyed (ha)	1,867.3	0	9,898.4	3,921.9
- # and length of streams surveyed	0	0	0	0
- Area of spawning beds rehabilitated	0	0	0	0
- # and length of streambank rehabilitated	0	0	0	0
- # of projects completed	18	0	6	8.0
- # of rehabilitation projects underway	0	0	0	0

- # of lakes not surveyed	0	0	0	0
Area of lakes not surveyed (ha)				
- # and area of streams not surveyed	0	0	0	0
- Area of spawning bed in need of rehabilitation	0	0	0	0
- # and length of streambanks in need of rehabilitation				1(100m)
- # of contaminant monitoring studies	N/A	N/A	N/A	
Population Management				
- # of netting studies	1	0	1	
- # of creel census programs	0	0	0	0
- # of other population studies	1	1	1	1
- # of lakes reclaimed	0	0	0	
- # of fishermen licenced for coarse fish removal	0	0	0	
- # of water bodies stocked	8	5	5	3.30
- # of fish stocked by species				
• brook trout	7,700	8,800	7,700	8,066
• rainbow trout	1,880	500	0	793

section 1.4 problems and issues

Issues concerning the fisheries resource of the Ignace District and their underlying problems are outlined in this section.

1.4.1 ISSUES

Issues may be grouped into 3 categories:

- a) loss of fish and fishing opportunities;
- b) loss of environmental quality;
- c) conflicts among users of the fisheries resource.
- d) loss of aesthetics

a. loss of fish and fishing opportunities

The primary concern of fisheries managers is the over-exploitation of a fishery resource. There are 9 lakes in the Ignace District that appear to be overharvested at the present time or are in danger of over-exploitation. The problem may be more extensive, but lack of current harvest data prohibits a complete assessment. A major reason for this overharvest is the ease of access made possible by a number of resource roads. While new access roads create resource development opportunities, they often create new problem areas for fisheries managers. New roads or extensions of existing road networks make new, previously untested waters available to sport fishermen. As knowledge of these waters and the species present spreads, a sudden, heavy influx of fishermen occurs producing heavy pressure on the fish stocks. When the catch per unit effort drops below the anglers' expectations, they move on to other lakes.

Particularly vulnerable to this type of pressure are small lake trout lakes. Lake trout is a slow-growing, late-maturing species with a relatively low productivity and, because of these factors, it is slow to recover from over-exploitation. A large number of small trout lakes occur in the southwestern part of the district. Management difficulties may be increased when these lakes become

more accessible by the proposed new system known as the Bending Lake road opens. Larger water bodies and other species are not ordinarily affected as quickly or severely but still are vulnerable. Other access roads which may cause management problems are those intended for the Brightsands cut area and for the north east portion in the district.

The present angler satisfaction level is 2.5 kilograms per day. An angler satisfaction level of 2 kg/day has been set as a target for sportfish by the Ignace DLUP. At the present time, anglers direct most of their effort towards lake trout, northern pike and walleye. The available stocks of these species can be expected to decline as angling pressure increases. The satisfaction level target will become difficult to maintain unless the efforts of anglers shift to include other species currently receiving less angling pressure. This adjustment may occur spontaneously as the stocks of preferred species decline, however, a more desirable solution would be to promote use of these other species before this depletion occurs.

b. loss of environmental quality

Physical, chemical, or biological processes can contribute to changes in the environment. These processes are not necessarily all detrimental but for the purposes of this report, those capable of contributing to declining fish populations will be considered.

Loss of environmental quality caused by pollution or habitat destruction is not a major concern in Ignace District at the present time. However, with continual increases in human activities, the potential exists for this to become of primary concern.

Physical damage to the environment or habitat can occur wherever alterations are made to, or near, water bodies. One major undertaking of this nature was the original construction of the Trans-Canada Pipeline through the district in 1958 and additional

lines being added in 1971 and 1981. These projects required crossings of water bodies along the route. Also, areas of surrounding forest had to be cleared to provide a right-of-way for the pipeline. These activities will have increased the levels of siltation directly at the crossings and indirectly by increasing run-off erosion from cleared areas. Spawning beds of species sensitive to excess siltation may be damaged by this type of activity and the extent of any damage thus caused is difficult to determine. Species preferring clear water may shun areas of increased turbidity.

Another possible effect of the increase in suspended particles is a change in relative numbers of organisms available as food. Adjustments of this nature in the food chain may make the area uninhabitable by a particular species and unless alternate, suitable areas are available, the population of that species will decline.

The banks of Revell River are identified for possible rehabilitation work to prevent further erosion.

A primary and more extensive cause of habitat deterioration by erosion are forest fires. Water bodies in areas denuded by fire are subjected to increased levels of sunlight because of the loss of shade from surrounding trees. The level of suspended material is increased either through direct deposition of plant material and ash, or by erosion due to the loss of shoreline vegetation. Apart from the direct physical damage caused by these deposits, the ash, in particular, has the potential to alter the water chemistry and destroy the ability of the lake to support some fish species. Statistics indicate that most fires are caused by humans. Increased access and activity could result in more fires and therefore an increased potential for habitat alteration and deterioration.

Various types of pollutants are also responsible for the deterioration of environmental quality. This is not recognized as a major problem in this district at the present time. Mining

exploration in the Sturgeon Lake area poses a threat to the ecological balance of the lake. Drill sites must be approved by work order but are still difficult to police. Occasionally sites are not cleaned up properly or oil spills occur. The potential development of a mine at the north end of Sturgeon Lake would present management difficulties for the fishery resource and environment.

Contamination of the water by chemicals, while not immediately detrimental to the fish, may cause them to be unsuitable for human consumption. This is particularly true of the top predator species. For instance, Barrel Lake was closed to commercial fishing from 1972 - 1977 because of high mercury levels found in pike and walleye. Anglers were advised as to the safe maximum quantities of these fish which could be consumed within a given time frame. The source of this mercury is thought to be natural. Levels of mercury in the fish appear to be receding.

c. user group conflicts

Conflicts arise when users compete or interfere with one another. There appears to be no major conflicts of this nature in the district but there are a few situations where minor conflicts exist.

Non-resident anglers fishing in Ignace District outnumber the resident anglers. However, the majority of non-residents are here for only a short period of time each year and concentrate mainly on a few lakes. Resident anglers tend to spread their activities over a larger number of less well known lakes. No conflict appears at present, but, as indicated by projections, there is expected to be a considerable increase in the number of non-residents fishing in the district by the year 2000. A conflict may develop regarding the allocation of the resource, especially in areas falling short of supply.

The Ignace District Land Use Plan presents the possibility of the creation of new provincial parks in the district. Candidate

parks include two waterway parks, the Turtle River and Brightsands River and one nature reserve Bonheur River. Kame. A total of 34,620 ha have been recommended for park status.

The establishment of Brightsands River Waterway Park may affect the four outposts and one private recreational camp located on Wapikamaski Lake. It was recommended in the Ignace District land Use Guidelines (1983) that the private recreational camp be phased out but that tourism may continue.

Commercial fishing is projected to increase in the district to meet the target set. To achieve this increase, either more lakes will have to be opened for commercial licencing or fishing effort must be redirected to include more coarse fish.

There is also a possible source of conflict between wild rice use and fisheries. Planting of wild rice in small, shallow lakes can effectively eliminate certain fisheries such as bait fish. Winter decay of the rice plants depletes the oxygen level in the water, and if the drop is significant, the fish will suffer winter kill.

Wild rice planting also may make some spawning areas unsuitable for certain species of sportfish. This could be more of a problem in bays of larger lakes.

Fisheries resource use, and other resource uses such as mining and timber, also can come into conflict. These other uses may create hazards to fisheries. These hazards have been discussed in the previous subsections.

d. loss of aesthetics

The loss of aesthetics is of concern but is difficult to define as it is a matter of personal preference, to some extent. Such things as a natural setting and remoteness are recognized as being important elements of a quality angling experience. These elements are likely of the most importance to guests of a tourist

resort on outpost camps.

The effect of road access and timber harvesting on aesthetics is kept to a minimum through the timber management planning process.

1.4.2 PROBLEMS

Underlying the issues discussed are 2 main types of problems. These are lack of public awareness and lack of scientific knowledge.

To achieve the targets set and to make this Fisheries Management Plan effective, public cooperation is necessary. Unless the public is aware of the issues involved and the aims of the plan, then that cooperation cannot be expected. To provide accurate information to the public requires that accurate information be available.

Related to this is the situation involving private lands. In these areas, the MNR has no jurisdiction over activities such as mining, timber or road building. The largest portion of these private lands are 3 freehold blocks in the district encompassing a total area of 83,883.6 ha. Unless existing cooperation with the companies involved is maintained, the lakes and subsequently the fisheries could be unnecessarily stressed.

The other concern is the lack of scientific knowledge. It is necessary to know and understand the total effects of various practices on the resource if effective management strategies are to be instituted. In many cases, this basic information is either completely unknown or only partially known.

Productivity, for example, is determined from the calculated MEI value for each lake. This is the best available parameter for measuring productivity where only minimum values are known for a lake. It is predictably conservative and, as more information becomes available, it is adjusted accordingly.

Virtually nothing is known about bait fish productivity. It is very difficult to establish a reasonable harvest estimate that will meet the projected demand and still be confident that the stock will not be over-exploited.

Bait fish supplies are often scarce in July and August due primarily to difficulty in catching the fish. The bait fish harvest is not regulated or managed efficiently. Since ponds are not registered, there is no way of knowing where the harvest comes from and if indeed some areas are not harvested to their potential. Areas not being fished to their potential should be transferred to a bait fisherman who would use the resource. This could in effect eliminate the supply problem.

Dams in the district are not known to affect the fishery resource. All dams are used to stabilize the level of the impounded lake. There is some local concern that walleye on Agimak may be adversely affected by the Agimak dam, but to date, there is no evidence to substantiate this.

The total effects of fire are not known nor are the effects of other resource use fully understood. Until more information about these effects can be obtained, decisions concerning fisheries management must be made subjectively.

section 1.5 projected yield

The estimated total potential yield of the Ignace district is approximately 646,000 kg/yr. This figure includes all lakes over 10 hectares in area whether the productivity is known or estimated and selected rivers and streams. The sportfish share of the capability is estimated to be 361,000 kg/yr. The current harvest of sportfish in the district is 291,000 kg/yr. The target set for the year 2000 is 396,000 kg/yr. This harvest rate cannot be maintained nor can the target be reached if the sportfish capability is accurate. A steady deterioration of angling success can be expected.

The total yield from lakes greater than 810 ha is approximately 288,000 kg/yr. Whitefish, the mainstay of the commercial fishery, is found in 30 of the 38 lakes over 810 ha. These lakes have a whitefish yield of approximately 69,000 kg/yr. Only 37,000 kg of whitefish comes from lakes currently fished. It is suggested that the balance of 28,000 kg of fish be made up of species other than whitefish or new lakes be opened to commercial fishing if feasible. It appears that there would be no problem meeting the target.

The projected yield for bait fish cannot be estimated because no method has been derived for estimating bait fish productivity. Present harvest and the target were discussed in Section 1.2.b.

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TABLE 1: ANNUAL SUMMARY OF DOG YEAR VALUE OF REPORTED FISH HARVEST, 1960-1985 BY SPECIES - IGNACE DISTRICT

Reported Value by Species (\$)

Year	Chub	Northern Pike	Trout	Ling	Lake Herring	Sucker	Whitefish	Yellow Walleye	Other	Total
1935	86	109	1,384	0	-	141	14,285	765	-	16,770
1984	567	683	612	0	-	298	22,260	2,118	-	26,538
1983	86	498	0	75	-	294	14,193	2,177	-	17,323
1982	100	792	0	0	-	1,879	13,781	705	-	17,257
1981	94	538	-	-	-	822	29,787	2,027	-	33,268
1980	402	425	-	36	-	247	24,034	146	-	25,290
1979	235	1,225	28	-	-	188	23,032	1,437	-	26,145
1978	579	457	-	-	-	40	12,482	746	-	14,865
1977	159	342	-	-	-	289	19,989	860	-	21,639
1976	226	731	280	-	-	338	14,689	3,516	-	19,781
1975	254	2,316	74	-	-	1,125	26,197	4,435	-	34,401
1974	134	1,127	-	-	-	285	2,189	1,782	-	5,517
1973	100	580	-	-	-	249	792	1,461	-	3,182
1972	102	1,207	90	-	-	4	913	3,507	-	5,823
1971	33	1,141	104	-	-	23	1,225	4,293	-	6,819
1970	93	2,797	179	-	-	76	11,957	6,747	-	21,849
1969	350	14,380	5,411	-	-	110	24,274	24,441	134	56,199
1968	410	4,597	5,194	-	-	207	17,808	19,975	-	48,191
1967	309	3,551	4,945	-	-	179	16,144	18,459	-	43,600
1966	277	3,617	5,003	205	-	54	20,512	23,012	-	52,726
1965	11	4,082	5,102	-	-	36	17,884	22,813	54	49,982
1964	5	3,113	4,348	20	-	-	12,454	22,541	-	42,481
1963	1	2,713	3,246	-	-	-	4,741	16,198	-	26,899
1962	33	3,762	3,107	-	-	-	10,386	16,287	-	33,575
1961	79	2,221	4,211	2	178	25	8,256	11,997	-	26,767

TABLE 2: SUMMARY OF BAIT FISH LICENCES, HARVEST AND VALUE - IGNACE DISTRICT, 1960 - 1985

Year	Blocks		No. of Bait Fish Licences			Licenced		Value of		Bait Fish		Percent	
	Available	Licenced	Dip	Seine	Trap	Comb.	Total	No. of Dealers	No. of Bait Fish Harvesters	No. of Dozens Bait Fish Caught	Bait Fish Caught & Sold1 Dozens	Value\$	Harvest Sold
1985	44	43	0	6	430	0	436	27	13	90,648	81,411	119,873	90
1984	44	43	0	6	430	0	436	25	14	72,689	41,167	67,997	57
1983	44	43	0	7	440	0	447	31	14	122,323	55,591	90,922	45
1982	44	43	0	7	440	0	447	29	14	91,717	40,242	69,533	44
1981	44	43	0	7	440	0	447	26	14	86,759	48,650	76,679	56
1980	44	44	0	8	440	0	448	31	15	78,876	34,733	43,658	44
1979	44	44	0	7	455	0	462	33	18	65,711	43,510	53,354	66
1978	44	42	0	7	425	0	432	28	16	55,046	42,234	43,946	77
1977	44	40	0	6	410	0	416	28	16	49,889	45,201	47,394	91
1976	44	41	0	6	430	0	436	25	16	24,089	21,522	19,437	89
1975	44	36	0	5	670	1	676	29	16	37,868	36,893	29,474	97
1974	44	32	0	4	490	0	494	19	13	29,607	23,704	19,879	80
1973	44	36	0	6	500	0	506	13	16	38,635	35,179	28,166	91
1972	*		0	4	490	0	494	19	15	46,174	*	17,516	
1971	*		0	1	155	0	156	11	10	46,480	*	11,163	
1970	*		0	5	341	0	346	16	13	17,170	*	13,249	
1969	*		0	7	237	0	244	11	12		*		
1968	*		0	6	229	0	235	8	9		*		
1967	*		0	5	225	0	230	6	10		*		
1966	*		0	7	180	0	187	6	10		*		
1965	*		0	7	125	0	132	5	8		*		
1964	*		0	8	139	0	147	5	7		*		
1963	*		1	2	90	0	93	3	2		*		
1962	*		1	2	60	0	63	1	1		*		
1961	*		1	3	40	0	44	3	1		*		
1960	*		1	2	15	0	18	1	1		*		

* - No information

1 - Value is fish sold to anglers - breakdown of actual sales by fishermen and dealers also available.
 Values prior to 1973 are minimal value of bait fish sold to fishermen and dealers (all returns are not available due to reorganization).

TABLE 3: TOTAL SURFACE AREA, NUMBER OF LAKES AND LAKE SURFACE AREA WITHIN IGNACE DISTRICT
FOURTH LEVEL WATERSHEDS

Watershed	% of Watershed Within District	Watershed Surface Areas within Ignace District (ha) ²	Total Number of L. by watershed Within District	Total Lake Surface Area by Watershed (ha)
4GB02	20	25,119	58	4,124.2
4GB03	50	86,361	85	20,444.7
4GB04	10	23,023	74	6,960.1
5PB09	25	5,442	13	814.7
5PB10	20	46,801	155	11,320.1
5PB12	40	9,093	20	1,438.6
5PB13	100	20,832	43	2,015.6
5PB14	100	14,805	41	2,153.1
5PB17	.5	548	3	55.8
5QA01	10	42,108	33	2,865.6
5QA02	90	62,253	79	14,516.8
5QA03	40	9,384	23	894.0
5QA04	40	272,673	359	40,377.3
5QA05	100	22,323	74	18,217.0
5QA06	85	65,529	88	8,405.3
5QA07	98	44,993	70	3,534.3
5QA08	25	27,658	13	1,835.2
5QA09	90	240,273	322	51,327.3
5Q001	25	74,064	82	5,434.0

Total Surface Area of Ignace District	Total Number of Lakes in District	Total Lake Surface Area in District
1,155,482 ha	1,641	196,044.3 ha

1 - Does not include lakes under 10 hectares surface area.
2 - Information from Cox (1978)
3 - Does not include lakes

TABLE 4: INDIAN DISTRICT SURVEYED LAKES SORTED BY WATER

TABLE 4: TULARE DISTRICT SURVEYED LAKES SORTED BY WATERSHED
MNR FISH COMMUNITY FIELD REPORT B

MNR DIS	SITE NAME	LAT LONG	WASHED	SURFACE AREA	TDS	DEPTH	WBM	NEI	SPP CNT	C	W	COM	KG/HA/YF	POTENTIAL	YIELD	SPP %	SPECIES	YIELD
																	KG/HA/YF	KG/YF
13 EAST CAMPUS LAKE (FISH) WE95-04		4913 9141	5P810	324.4	13.5	10.8		1.3	6	0	0	29	1.53		513.6		0.35	107.6
																0.20	0.35	103.5
																0.20	0.35	107.6
																0.67	0.67	138.4
																0.17	0.17	56.4
13 FAUN (NL) WE85-40		4915 9151	5P810	33.2	7.0	6.4		1.1	5	0	0	26	1.46		55.8		0.37	14.0
																0.37	0.37	14.0
																0.19	0.19	7.3
																0.54	0.54	20.6
																0.53	0.53	20.2
13 FLORA (NL) WE85-42		4914 9150	5P810	38.2	14.5	5.8		2.5	6	0	0	4	2.11		80.6		0.27	10.5
																1.31	1.31	50.0
																0.49	0.49	29.1
																0.35	0.35	15.1
																1.21	1.21	72.2
13 GEORGE LAKE (NL) WE85-28		4916 9153	5P810	59.7	15.5	7.4		2.1	7	0	0	4	1.95		116.4		0.41	77.2
																0.41	0.41	77.2
																0.01	0.01	20.1
																0.60	0.60	114.3
																0.25	0.25	77.2
13 ISLETS LAKE WE85-16		4913 9216	5P810	189.3	16.0	11.4		1.4	14	0	0	23	1.63		308.6		0.51	111.3
																0.65	0.65	148.3
																0.27	0.27	50.6
																0.10	0.10	22.3
																0.48	0.48	79.2
13 LITTLE MOOSEHORN LAKE (NL) WE85-16		4914 9142	5P810	218.2	24.6	10.5		2.3	5	0	0	23	2.04		445.1		0.51	111.3
																0.65	0.65	148.3
																0.27	0.27	50.6
																0.10	0.10	22.3
																0.48	0.48	79.2
13 MOOSEHORN LAKE WE85-16		4915 9140	5P810	173.8	20.1	11.5		1.7	3	0	0	17	1.78		325.3		0.51	111.3
																0.65	0.65	148.3
																0.27	0.27	50.6
																0.10	0.10	22.3
																0.48	0.48	79.2

TABLE 4: INDIAN DISTRICT SURVEYED LAKES SORTED BY WATER

TABLE 4: L. L. DISTRICT SURVEYED LAKES SORTED BY WATERFISH

HNR FISH COMMUNITY/YIELD REPORT B

HNR DIS	SITE NAME	SURFACE		MEAN DEPTH	NEI	SPP CNT	C W	SPOF POTENTIAL COM	YIELD KG/YF	SPECIES KG/HA/YF	YIELD KG/YF			
		LAT LONG	WSHD AREA											
13 NL WE75-06		4912 9155	5PB10	113.4	12.4	5.9	2.1	10	W	4	4.95	221.1	131 25 331 13 RES 62	55.3 38.7 137.1
13 NL WE85-22		4913 9153	5PB10	46.4	13.9	6.6	2.1	11	W	4	1.95	90.5	131 25 331 13 RES 62	22.6 11.8 56.1
13 NL WE85-24		4915 9154	5PB10	72.8	14.1	4.7	3.0	7	W	4	2.30	167.4	131 25 331 13 RES 62	41.9 21.8 103.8
13 NL WE85-25		4916 9153	5PB10	104.2	18.3	6.3	2.9	4	W	0	2.26	235.5	331 13 RES 87	30.6 204.9
13 NL WE85-53		4916 9150	5PB10	45.7	14.3	2.8	5.1	8	W	4	2.91	133.0	131 25 331 13 RES 62	33.3 17.3 82.5
13 NL WE85-54		4916 9151	5PB10	24.6	13.3	4.6	2.9	5	W	4	2.26	78.2	131 25 331 13 RES 62	19.6 10.2 48.5
13 NL WE95-01		4916 9145	5PB10	115.2	14.5	5.8	2.5	8	C	20	2.11	243.1	081 25 131 25 RES 50	60.8 60.8 121.6
13 NL WE95-1C		4913 9141	5PB10	115.6	13.0	4.8	2.7	13	W	2	2.19	352.2	091 24 131 25 331 22 RES 19	66.8 61.3 81.0 42.1
13 OWL LAKE XE05-76		4914 9136	5PB10	193.5	17.5	4.6	3.8	4	W	3	2.55	493.4	131 25 RES 75	123.4 370.1

WUP FISH COMMUNITY/YIELD REPORT B

WUR UIS	SITE NAME	LAT LONG	WSEID	SURFACE AREA	TDS	DEPTH	MEAN NEI	SPP CNT	C	SPOE COM	POTENTIAL KG/HA/YR	YIELD KG/YR	SPP %	SPECIES KG/HA/YR	YIELD KG/YR
13 PATRICIA LAKE WES5-23		4914 9154	5PE10	95.1	20.7	5.9	3.5	9	W	13	2.46	233.9	091 24 131 25 334 32 RES 19	0.59 0.62 0.79 0.47	56.1 58.5 74.8 44.4
13 SHAW LAKE (NL) WES5-03		4917 9135	5PE10	169.9	15.3	7.3	2.1	3	C	16	1.95	331.3	081 25 331 13 RES 62	0.49 0.25 1.21	82.8 43.1 205.4
13 SWIRCH LAKE WES5-01		4913 9205	5PE10	673.9	17.4	6.0	2.9	18	W	13	2.26	1523.0	091 24 131 25 334 32 331 13 RES 6	0.54 0.57 0.72 0.23 0.14	365.5 380.8 487.4 188.0 91.4
13 WEST PARK LAKE (NL) WES5-15		4923 9210	5PE10	123.0	11.4	5.2	3.2	3	W	5	2.00	246.0	131 25 334 32 331 13 RES 30	0.50 0.64 0.26 0.60	61.5 78.7 32.0 73.8
13 BACK LAKE (NL) WES5-12		4915 9216	5PE12	256.5	16.8	3.0	5.6	5	W	5	3.04	799.8	131 25 334 32 331 13 RES 30	0.76 0.97 0.40 0.91	195.0 249.5 101.4 233.9
13 PEAK LAKE WES5-03		4915 9216	5PE12	524.3	17.7	7.7	2.3	12	C	21	2.04	1069.6	081 25 131 25 334 32 331 13 RES 5	0.51 0.51 0.65 0.27 0.10	257.4 267.4 342.2 139.0 52.5
13 DRUM LAKE (NL) WES5-07		4917 9209	5PE12	103.1	14.4	4.8	3.0	12	W	5	2.30	237.1	131 25 334 32 331 13 RES 30	0.58 0.74 0.23 0.69	59.2 75.6 26.3 71.1

TABLE 4. FISH COMMUNITY/YIELD REPORT B

HWR DTC	SITE NAME	LAT LONG	WCHED AREA	SURFACE	TDS	DEPTH	MEI	SPP CNT	C W	SPOF COM	POTENTIAL KG/HA/YR	YIELD KG/YR	SPP %	SPECIES KG/HA/YR	YIELD KG/YR
13 NL WESS-08		4915 9212	5P12	33.2	20.5	1.8	11.4	3	W	5	4.19	139.5	131 25	1.05	34.9
													334 32	1.34	44.6
													RES 43	1.80	60.0
13 NL WESS-13		4914 9216	5P12	61.0	26.5	4.2	6.3	2	W	5	2.21	195.9	131 25	0.80	49.0
													334 32	1.03	62.7
													331 13	0.42	25.5
13 NL WESS-29		4915 9212	5P12	33.4	20.2	2.7	7.5	3	W	5	3.47	112.4	131 25	0.87	28.1
													334 32	1.11	36.0
													FES 43	1.49	48.3
13 NL WESS-32		4914 9211	5P12	15.0	14.2	2.7	5.3	6	W	5	2.97	44.6	131 25	1.74	11.2
													334 32	0.95	14.3
													331 13	0.39	5.8
13 NL WESS-33		4914 9216	5P12	20.1	12.5	3.2	3.5	4	W	4	2.46	74.0	131 25	0.62	18.5
													331 13	0.82	9.6
													RES 62	1.53	45.9
13 NL WESS-34		4917 9212	5P12	47.9	31.2	3.9	3.9	4	W	5	3.57	171.0	131 25	0.89	43.8
													324 32	1.14	54.7
													321 13	0.46	22.2
13 NL WESS-49		4916 9214	5P12	105.2	20.1	2.7	2.5	5	W	5	2.46	567.4	131 25	0.62	44.3
													334 32	0.79	37.1
													331 13	0.32	34.8
13 NL WESS-54		4916 9216	5P12	51.6	12.1	4.5	1.9	19	W	1	2.26	522.9	334 32	0.72	107.1
													331 13	0.39	18.1
													RES 55	1.24	388.1

SHARP FISH COMMUNITY/YIELD REPORT E

HWR DIS	SITE NAME	LAT LONG	WSEID	SUBFACE AREA	TDS	MEAN DEPTH	SPP CNT	C W	SPOE COM	POTENTIAL KG/HA/YR	YIELD KG/YR	SPP % RES	POTENTIAL KG/HA/YR	SPECIES YIELD KG/YR
13 WE76-05	DOREEN LAKE	4922 9157	5PB13	222.4	13.9	4.8	3	W	0	2.26	502.6			
13 WE75-44	HALK LAKE (NL)	4916 9157	5PB13	49.8	19.5	3.0	5	W	5	3.25	161.9	131 25 334 32 331 15 RES 30	0.61 1.04 0.42 0.95	40.5 51.8 21.6 42.6
13 WE76-52	KINHOAPIKU LAKE	4918 9200	5PB13	212.6	18.0	7.5	10	C	21	2.08	442.2	081 25 121 25 234 32 331 13 RES 5	0.52 0.52 0.67 0.37 0.10	110.6 110.6 141.8 57.5 22.1
13 WE75-26	NAMAYGOOS LAKE (NL)	4917 9201	5PB13	126.3	15.0	8.8	13	C	21	1.73	224.8	081 25 131 25 334 32 331 13 RES 5	0.45 0.47 0.57 0.23 0.09	56.2 56.2 71.9 29.2 11.2
13 WE66-22	NL	4918 9204	5PB13	109.7	17.7	2.3	12	W	5	3.51	385.0	131 25 334 32 331 12 RES 40	0.88 1.12 0.42 1.25	96.3 123.5 50.1 115.5
13 WE75-35	NL	4911 9153	5PB13	146.5	19.5	7.4	4	C	17	2.11	317.4	081 25 334 32 RES 43	0.52 0.61 0.91	73.6 104.5 135.6
12 WE65-32	PADY LAKE	4916 9202	5PB13	455.8	15.4	6.1	16	C	23	1.87	855.0	081 25 091 24 131 25 331 13 RES 13	0.47 0.45 0.47 0.34 0.24	214.5 205.9 214.5 111.5 111.5

HRP DIS	SITE NAME	LAT LONG	WASHED AREA	SURFACE	TDS	MEAN DEPTH	NET	SPP	C	SPOE	POTENTIAL	YIELD	SPP %	SPECIES KG/HA/YR	YIELD KG/YF
13 BALMORAL LAKE WE86-54		4918 9150	5PB14	294.5	14.0	6.1	2.3	-	C	20	2.04	599.8	081 25 131 25 331 13 RES 37	0.51 0.51 0.27 0.75	159.0 150.0 78.0 221.9
13 BELMONT LAKE (NL) WE86-40		4918 9152	5PB14	116.3	12.2	3.3	3.7	7	C	16	2.52	293.1	081 25 331 13 RES 62	0.63 0.33 1.56	73.3 38.1 181.7
13 BLACKHOLE (NL) WE85-62		4916 9149	5PB14	91.3	13.3	5.8	2.3	9	C	16	2.04	186.3	081 25 RES 75	0.51 1.53	46.6 139.7
13 CLEAR LAKE (NL) WE85-56		4915 9150	5PB14	33.6	20.8	6.3	3.3	6	W	4	2.40	80.6	131 25 331 13 RES 62	0.60 0.31 1.49	20.1 10.5 50.0
13 GREENHEART LAKE WE86-18		4921 9147	5PB14	331.8	14.6	4.7	3.1	7	W	5	2.33	773.1	131 25 334 32 331 13 RES 30	0.59 0.75 0.30 0.70	193.3 247.4 100.5 231.9
13 HORSESHOE LAKE (NL) WE86-25		4921 9150	5PB14	104.2	13.9	4.2	3.3	8	C	16	2.40	250.1	081 25 331 13 RES 62	0.60 0.31 1.49	62.5 32.5 155.1
13 NL WE85-63		4917 9152	5PB14	55.5	17.3	6.4	2.7	9	C	20	2.19	121.5	081 25 131 25 331 13 RES 37	0.55 0.55 0.28 0.81	30.4 30.4 15.2 45.0
13 NL WE86-08		4917 9145	5PB14	97.9	12.5	4.7	2.7	2	W	4	2.19	214.4	131 25 331 13 RES 62	0.55 0.28 1.86	53.6 27.9 132.9
13 NL WE86-54		4920 9153	5PB14	36.7	11.8	4.7	2.5	7	C	16	2.11	77.4	081 25 331 13 RES 62	0.53 0.37 1.31	19.4 10.1 48.1

TABLE 4: IGHAMÉ DISTRICT SURVEYED LAKES SORTED BY WATERS

FOR FISH COMMUNITY/YIELD REPORT B

MNP DIS	SITE NAME	LAT LONG	WSEID	SURFACE AREA	TDS	MEAN DEPTH	MEI	SPP CNT	C	SPOF COM	POTENTIAL YIELD KG/YR	SPP %	SPECIES KG/HM/YR	YIELD KG/YR
13 NL WES6-53		4918 9149	5PE14	67.5	15.9	4.2	3.7	5	W	4	2.52	131 25 331 13 RES 62	0.63 0.63 1.56	42.5 22.1 105.5
13 POPEYE LAKE (NL) WES6-33		4920 9152	5PE14	103.9	12.7	3.1	1.4	6	C	16	1.63	061 25 331 13 RES 62	0.41 0.21 1.01	42.2 22.0 104.9
13 ROBERTS LAKE WES6-06		4917 9148	5PE14	57.4	14.7	5.3	2.5	3	W	4	2.23	131 25 RES 75	0.56 1.67	32.0 96.0
13 HICKLE LAKE WFS1-04		4945 9213	50A01	334.3	39.1	3.4	3.5	6	W	5	3.67	131 25 334 32 331 13 RES 39	0.92 1.17 0.48 1.10	307.3 393.3 159.6 362.7
13 SUGARHILL LAKE WFS0-06		4941 9219	50A01	505.5	38.9	4.6	3.1	9	W	5	3.59	131 25 334 32 331 13 RES 29	0.90 1.15 0.47 1.02	453.7 560.7 135.9 594.4
13 TALMAN LAKE WFS1-02		4946 9210	50A01	363.9	44.0	5.3	20.0	8	W	5	5.39	131 25 334 32 331 13 RES 30	1.53 1.72 0.70 1.62	476.9 610.4 245.0 572.2
13 ARAMATSEWIA LAKE (ELATEDOOK) WFS0-10		4940 9154	50A02	1337.7	26.2	5.4	3.2	11	C	29	2.22	061 25 091 200 131 421 334 427 331 411 RES 40	0.47 0.45 0.47 0.60 0.24 0.00	636.1 410.1 626.1 914.1 330.6 0.0
13 ARAMATSEWIA LAKE WFS0-02		4944 9149	50A02	731.9	25.1	5.2	4.1	12	W	5	2.73	131 25 334 32 331 13 RES 30	0.70 0.39 0.36 0.83	543.4 352.6 350.3 650.1

В ЛОДЗЕ ПІСЛЯ/ПІДНИМАННЯ МІЛІ ЗНАК

WPP DIS	SITE NAME	LAT LONG	WSEID	SURFACE AREA	MEAN DEPTH	SPP CNT	C	SPOE POTENTIAL COM	YIELD KG/YR	SPP %	SPECIES KG/HAYR	YIELD KG/YR			
13 BASKET LAKE WF70-05		4943 9100	50A02	4267.0	26.6	5.9	4.5	13	C	29	2.75	11734.3	081 A21	0.58	2435.7
													091 A20	0.55	2306.6
													131 A21	0.58	2465.2
													334 A27	0.74	3155.4
													331 A11	0.30	1281.9
	RES A 0	0.00	0.0												
13 DOLLAR LAKE WF80-20		4940 9152	50A02	231.9	29.4	1.1	26.7	7	W	5	6.14	1433.9	131 25	1.54	356.0
													334 32	1.96	455.6
													331 13	0.80	185.1
													RES 30	1.84	427.2
13 GOLDEN LAKE (NL) WF90-01		4940 9144	50A02	153.8	36.8	4.0	9.2	12	W	5	3.80	603.4	131 25	0.95	150.9
													334 32	1.22	193.1
													331 13	0.49	78.4
													RES 30	1.14	181.0
13 GUSTAFSON LAKE (ARSEL) WF90-09		4937 9151	50A02	144.6	22.0	7.6	2.9	6	C	20	2.26	336.8	081 25	0.57	81.7
													131 25	0.57	81.7
													331 13	0.29	42.5
													RES 37	0.24	120.9
13 HEATHWALT LAKE WF90-02		4942 9142	50A02	743.0	39.8	4.8	6.2	11	W	5	3.62	2697.1	131 25	0.91	674.2
													334 32	1.16	663.1
													331 13	0.47	553.6
													RES 30	1.09	509.1
13 HOOK LAKE WF79-02		4935 9154	50A02	631.8	31.8	2.9	7.5	9	W	5	3.47	2157.6	131 25	0.87	539.4
													334 32	1.11	690.4
													331 13	0.45	350.5
													RES 30	1.04	647.2
13 KUKUKUS LAKE WF91-07		4947 9141	50A02	612.6	31.0	5.0	6.2	15	W	13	3.18	13129.6	091 24	0.26	3151.1
													131 25	0.39	323.4
													334 32	1.02	4261.5
													331 13	0.41	1706.8
													RES 06	0.19	787.8

ANNUAL FISH COMUNITTY YIELD REPORT R

NAME	SITE NAME	LAT	LONG	WHEED	SURFACE AREA	TDS	DEPTH	MEAN	SPP	C	SPOE	POTENTIAL	YIELD	SPP	%	SPECIES	YIELD
LINE									CM	M	COM	KG/HA/YF	KG/YF			KG/HA/YF	KG/YF
13	LINWOOD LAKE (NL)	4940	9137	50A02	14.2	11.2	4.2	3.2	3	M	4	2.23	31.9	131	25	0.56	5.6
	WE90-16													331	13	0.29	4.1
														FE5	62	1.39	19.8
13	LITTLE SNOWSTORM LAKE (NL)	4937	9143	50A02	5.7	4.2	6.9	.0	3	C	32	1.19	6.8	980	25	0.30	1.7
	WE99-13													FE5	75	0.89	5.1
13	MIT LAKE	4945	9146	50A02	467.5	30.4	5.3	9.2	7	U	5	3.80	1776.5	131	25	0.95	444.1
	WE91-10													334	32	1.22	568.5
														301	13	0.49	230.9
														FE5	30	1.14	533.0
13	WSD LAKE (NL)	4934	9153	50A03	121.5	27.7	4.7	5.9	7	U	5	3.11	377.9	131	25	0.73	94.5
	WE89-14													334	32	1.00	120.9
														FE5	43	1.34	162.5
13	OSTRUM LAKE (NL)	4940	9149	50A02	63.8	27.2	1.9	14.3	2	U	5	4.63	295.4	131	25	1.16	73.9
	WE80-16													334	32	1.43	94.5
														331	13	0.60	32.4
														FE5	30	1.39	52.6
13	PUITO LAKE (NCHERWISSE)	4940	9139	50A02	157.5	29.3	13.5	1.5	6	C	17	1.63	266.0	981	25	0.42	67.0
	WE90-14													331	13	0.22	34.8
														334	32	0.54	85.8
														FE5	30	0.50	80.4
13	TEBULE LAKE (NL)	4938	9141	50A02	13.2	41.7	1.0	10.7	6	C	30	4.07	55.4	980	25	1.02	12.9
	WE89-12													FE5	75	3.05	41.6
13	SNOWSTORM LAKE (NL)	4937	9144	50A02	69.2	33.6	5.4	4.0	7	C	32	3.61	186.6	976	25	0.65	45.2
	WE95-13													980	25	0.65	45.2
														FE5	50	1.39	30.3
13	TOUMPE LAKE (NCHERWISSE)	4940	9147	50A02	117.2	25.5	1.0	5.7	14	U	5	3.11	395.5	131	25	0.78	193.0
	WE89-15													331	13	0.40	102.4
														324	32	1.00	254.6
														FE5	30	0.70	238.6

TABLE 4: IGH DISTRICT SURVEYED LAKES SORTED BY WATERSE

MNR FISH COMMUNITY/YIELD REPORT 8

MNR UIS	SITE NAME	LAT LONG	WHEED AREA	SURFACE AREA	TDS	DEPTH	MEI	SPP		C	SPOE POTENTIAL		YIELD	SPECIES	YIELD
								CMT	W		KG/HA/YF	KG/HA/YF			
13 STEINHOFF LAKE (NL) WE90-09		4939 9140	50A02	102.9	29.9	4.1	7.3	13	W	5	3.42	351.9	131 25	0.96	88.0
													334 32	1.09	112.6
													331 13	0.44	45.7
													RES 30	1.03	105.6
13 WATTS LAKE (NL) WE90-17		4941 9139	50A02	17.0	12.0	5.2	2.3	3	W	4	2.04	34.7	131 25	0.51	8.7
													331 13	0.27	4.5
													RES 62	1.26	21.5
13 WIDOW LAKE WE70-12		4944 9154	50A02	173.4	23.1	6.5	3.4	13	W	5	2.42	421.4	131 25	0.61	195.4
													334 32	0.78	164.9
													331 13	0.32	54.8
													RES 30	0.73	135.4
13 BARREL LAKE XF00-03		4935 9131	50A04	2429.3	23.8	8.8	2.7	16	W	15	2.19	5320.2	091 A22	0.47	1150.3
													131 A23	0.49	1198.2
													316 A15	0.24	914.8
													334/332 A29	0.63	1533.8
													331 A12	0.26	623.1
													RES A 0	0.00	0.0
13 BERGLUND LAKE (NL) WE99-29		4936 9139	50A04	18.1	6.0	6.0	5	5	C	32			050 25		-
													RES 75		
13 COTTLE LAKE XF60-39		4939 9141	50A04	261.0	30.7	1.2	25.6	14	W	5	6.02	1571.2	131 25	1.51	392.9
													334 32	1.93	502.8
													331 13	0.78	204.3
													RES 30	1.81	471.4
13 CRYSTAL LAKE XF20-01		4943 9110	50A04	119.0	57.4	1.9	30.2	4	W	13	6.49	723.3	091 24	1.56	165.4
													131 25	1.62	193.1
													334 32	2.08	247.1
													331 13	0.34	100.4
													RES 6	0.39	46.3

TABLE 4: IGAD DISTRICT SURVEYED LAKES SORTED BY WATER

HNR FISH COMMUNITY/YIELD REPORT B

HNR DIS	SITE NAME	LAT LONG	WATER	SURFACE AREA	IDS	MEAN DEPTH	MEI	SPP CNT	C	SPOE COM	POTENTIAL YIELD KG/HA/YR	SPP X	SPECIES KG/HA/YR	YIELD KG/YR
13 ELSON LAKE (NE) XE22-05		4952 9110	50A04	165.1	31.4	1.4	22.4	7	W	5	5:67	936.1	131 25	1.42 234.0
													334 32	1.81 299.6
													331 13	0.74 121.7
													RES 30	1.70 380.8
13 ENGLISH LAKE XE30-14		4940 9109	50A04	168.8	21.9	9.5	2.3	6	W	13	2.04	222.0	091 24	0.49 53.3
													131 25	0.51 55.5
													334 32	0.65 71.0
													331 13	0.27 28.9
13 EVA LAKE XE30-05		4941 9105	50A04	436.0	21.8	3.7	5.9	9	W	16	3.11	1356.0	091 24	0.75 325.4
													131 25	0.78 339.0
													334/332 32	1.00 483.9
													331 13	0.40 176.3
13 GLITTER LAKE XE32-19		4950 9046	50A04	579.1	45.9	3.4	13.5	12	W	15	4.52	2617.5	091 A22	0.98 565.9
													131 A23	1.02 569.5
													316 A15	0.69 400.9
													334 A29	1.30 754.6
13 HALLI LAKE XE20-12		4942 9113	50A04	9.7	106.8	7.0	14.4	3	C	32	4.65	45.1	080 25	1.16 11.3
													331 13	0.60 5.9
													RES 62	2.88 26.0
													RES A 0	0.00 -0.0
13 HUT LAKE XE11-03		4949 9121	50A04	456.7	37.0	3.7	10.0	13	W	15	3.95	1804.0	091 A22	0.85 390.1
													131 A23	0.89 406.2
													316 A15	0.60 276.3
													334 A29	1.14 520.1
													331 A12	0.46 211.3
													RES A 0	0.00 0.0

ANNUAL FISH COMMUNITY/YIELD REPORT B

MNR PIS	SITE NAME	LAT LONG	WATER AREA	SURFACE AREA	TDS	DEPTH	MEI	SPP ONT	C W	SPOE COM	POTENTIAL KG/HA/YR	YIELD KG/YR	SPP %	SPECIES KG/HA/YR	YIELD KG/YR
13	DAVY LAKE (NL) WE97-03	4934 9139	50A05	4.8	35.9	1.2	29.9	5	W	1	6.46	31.0	334 32 331.13 RES 55	2.07 0.84 3.55	9.9 4.0 17.1
13	HEX (NL) XE08-02	4932 9130	50A05	71.5	38.7	2.6	14.9	10	W	5	4.72	337.5	131 25 334 32 331 13 RES 30	1.18 1.51 0.61 1.42	84.4 108.0 43.9 101.3
13	INDIAN LAKE WE99-01	4934 9140	50A05	5465.6	33.3	9.5	3.5	16	E	31	2.46	9755.9	091 A18 091 A18 131 A18 316 A13 334 A24 331 A10 RES A 0	0.45 0.43 0.45 0.31 0.58 0.24 0.00	1793.4 1721.6 1793.4 1219.5 3395.5 932.5 0.0
13	KERWATER LAKE WE97-01	4936 9140	50A05	437.9	20.7	5.4	4.0	4	W	13	2.67	1163.2	091 24 131 25 334 32 331 13 RES 6	0.64 0.67 0.85 0.25 0.16	380.6 292.3 374.1 152.0 70.2
13	LITTLE INDIAN LAKE (NL) WE98-03	4936 9139	50A05	291.4	27.9	1.6	15.5	9	W	15	4.81	1401.6	091 A22 131 A23 216 A15 334 A29 331 A12 RES A 0	1.04 1.08 0.74 1.39 0.56 0.00	303.0 315.7 214.7 404.1 164.2 0.0
13	LOWER ASIN LAKE (LITTLE SANDP. XE07-13	4935 9132	50A05	316.7	22.1	2.7	11.9	11	W	5	4.37	925.2	131 25 334 32 331 13 RES 30	1.09 1.37 0.56 1.38	231.2 296.1 120.2 277.6

TABLE 4: 16 FISH CATCH DISTRICT SURVEYED LAKES SORTED BY WATERS

WATER DIST	SITE NAME	LAT LONG	WEIRED	SURFACE AREA	TDS	DEPTH	WEIR	SPP		C	SPOF POTENTIAL		YIELD KG/YR	SPP A	SPECIES KG/HA/YR	YIELD KG/YR
								CNT	W		W	KG/HA/YR				
13 HANEIOWESS LAKE (ORANGHATANG)	WE98-01	4924 9149	50A05	539.5	27.0	16.1	2.2	12	C	29	2.04	10331.4	081 A21	0.43	2274.6	
													091 A20	0.40	2166.3	
													131 A21	0.43	2274.6	
													334 A27	0.55	2924.5	
													331 A11	0.22	1191.5	
													RES A 0	0.0	0.00	
13 MONANARA LAKE (SECOND)	WE96-07	4920 9141	50A05	537.2	13.9	12.6	1.1	4	W	5	1.46	784.3	131 25	0.37	196.1	
													334 32	0.47	251.0	
													RES 43	0.63	327.2	
13 NL WE78-34		4929 9154	50A05	40.0	27.8	4.8	5.8	5	W	4	3.09	123.6	131 25	0.77	30.9	
													331 13	0.40	16.1	
													RES 62	1.92	76.6	
13 NL WE98-04		4929 9154	50A05	98.9	21.6	4.5	4.8	6	W	4	2.84	280.9	131 25	0.71	70.2	
													331 13	0.37	36.5	
													RES 62	1.76	174.2	
13 NL WE18-07		4931 9128	50A05	25.3	12.2	2.6	4.7	1	W	4	2.81	65.5	131 25	0.70	16.4	
													RES 75	2.11	49.1	
13 O'DELL LAKE (NL) XE07-22		4925 9136	50A05	14.0	17.2	3.5	4.9	5	C	32	2.86	40.0	080 25	0.72	70.0	
													RES 75	2.15	30.0	
13 OSAGUAP LAKE WE07-12		4924 9149	50A05	371.4	22.1	4.8	4.6	2	C	16	2.78	1032.5	081 25	0.70	252.1	
													RES 75	2.09	744.4	
13 BUECHI LAKE (TFOUT) XE09-01		4984 9132	50A05	247.5	42.8	9.1	4.7	12	C	28	2.61	6877.5	081 25	0.70	1719.4	
													091 24	0.67	1650.6	
													131 25	0.70	1719.4	
													331 13	0.37	894.1	
													RES 12	0.37	894.1	

TABLE 4: IGAD DISTRICT SURVEYED LAKES SORTED BY WATERSHED

ANNUAL FISH COMMUNITY/YIELD REPORT E

MNR DIS	SITE NAME	SURFACE			TDS	MEAN		SPP CNT	C	SPOE POTENTIAL		YIELD KG/YF	SPECIES		YIELD KG/YF	
		LAT LONG	WEHED AREA	WEHED AREA		DEPTH	WEI			KG/HA/YF	KG/HA/YF		SPP %	KG/HA/YF		
	13 PIPPLE LAKE WE98-21	4932 9144	50A05	168.4	38.8	2.5	15.5	5	W	5	4.91	810.0	131 25	1.20	202.5	
													334 32	1.54	359.2	
													331 13	0.63	105.3	
													RES 30	1.44	242.0	
	13 ROBINSON LAKE XE08-24	4950 9131	50A05	131.8	39.7	6.2	6.4	5	W	1	3.23	425.7	334 32	1.03	136.2	
													331 13	0.42	55.3	
													RES 55	1.78	234.1	
	13 ROUND LAKE (NL) WE97-04	4925 9145	50A05	217.1	15.5	1.7	9.1	7	W	5	3.78	820.6	131 25	0.95	205.2	
													334 32	1.21	262.6	
													331 13	0.49	106.7	
													RES 30	1.13	246.2	
	13 SALLY LAKE WE98-09	4930 9143	50A05	389.9	50.7	5.5	9.2	7	W	5	3.60	1481.6	131 25	0.95	370.4	
													334 32	1.22	474.1	
													331 13	0.49	192.6	
													RES 30	1.14	444.5	
	13 SANDRAR LAKE XE08-07	4928 9125	50A05	1290.5	44.2	4.0	9.2	6	W	5	3.60	4300.9	131 25	0.95	1226.0	
													334 32	1.22	1569.2	
													331 13	0.49	637.5	
													RES 30	1.14	1471.2	
	13 SAVITSKY LAKE (NL) XE07-12	4929 9132	50A05	11.3	21.0	7.5	2.8	1	W	4	2.33	25.2	131 25	0.36	6.3	
													RES 75	1.67	18.9	
	13 SHRIMP LAKE (NL) WE99-34	4954 9139	50A05	9.7	59.2	4.0	14.2	1	C	22	4.71	45.7	380 25	1.18	11.4	
													RES 75	2.53	34.3	
	13 VALJEAN LAKE WE99-07	4923 9150	50A05	240.2	23.0	7.0	4.0	3	C	16	3.61	626.9	381 25	0.65	156.7	
													331 13	0.34	61.5	
													RES 50	1.62	389.7	

TABLE 4: IGAD DISTRICT SURVEYED LAKES SORTED BY WATERSHED AND FISH COMMUNITY/YIELD REPORT B

HWR	DIS	SITE NAME	LAT LONG		WGS84 AREA	SURFACE		TDS	MEAN DEPTH		SPP CMT		C	SPEC POTENTIAL		YIELD		SPECIES YIELD
									WEI	CMT	KG/HM/YF	KG/YF		SPP %	KG/HM/YF	KG/YF		

13 KRISKO LAKE XE20-1C																		
			4942 911C	50A04	23.5	55.5	6.1	5.1	2	C	32	3.78	88.8	080 25	0.95	22.2		
														331 13	0.45	11.5		
														PES "62	2.34	55.1		
13 MARS LAKE (DRAINVILLE) WE90-19																		
			4943 9137	50A04	131.5	30.7	3.3	9.3	10	W	5	3.82	502.3	131 25	0.96	125.6		
														334 32	1.22	160.7		
														331 13	0.50	65.3		
														PES 30	1.15	150.7		
13 MATTAUA LAKE XF40-08																		
			4942 9058	50A04	1730.6	30.1	1.8	15.7	18	W	13	4.97	8601.1	091 24	1.19	2064.3		
														131 25	1.24	2150.3		
														334/332 32	1.59	2752.4		
														331 13	0.65	1112.1		
														PES 6	0.30	516.1		
13 MCCLAIR LAKE XE20-09																		
			4948 9112	50A04	44.8	36.9	6.7	5.5	5	C	32	3.02	135.3	080 25	0.75	33.3		
														PES 75	2.25	101.5		
13 MOSS LAKE XF21-02																		
			4948 9117	50A04	120.0	29.0	1.6	18.1	3	W	4	5.15	618.0	131 25	1.29	154.5		
														PES 75	3.86	463.5		
13 PRESS LAKE XF01-02																		
			4947 9130	50A04	6617.9	29.7	5.6	5.5	16	W	15	2.97	10745.2	091 A22	0.64	3323.3		
														131 A23	0.67	2420.1		
														316 A15	0.45	1645.7		
														334 A29	0.86	3097.7		
														331 A12	0.35	1258.4		
														PES A 0	0.00	0.0		
13 SELWIN LAKE XE58-01																		
			4927 9053	50A04	953.1	31.0	1.5	15.3	13	W	5	4.92	4713.9	131 25	1.25	1175.5		
														334/333 32	1.57	1508.4		
														331 13	0.64	615.8		
														PES 50	1.48	1414.2		
13 SHANTY LAKE XF21-01																		
			4949 9115	50A04	125.0	50.7	5.0	13.1	5	W	5	3.96	452.0	131 25	0.95	124.5		
														334 32	1.27	159.7		
														331 13	0.51	64.5		
														PES 50	1.19	149.7		

TABLE 4: IGNALE DISTRICT SURVEYED LAKES SORTED BY WATERSHED AND FISH COMMUNITY/YIELD REFLECT B

MNR DIS	SITE NAME	LAT LONG		WASHED AREA	SURFACE		MEAN DEPTH		SPP CNT		C	SPOF POTENTIAL COM		YIELD KG/YR	SPP %	SPECIES KG/HA/YR		YIELD KG/YE
					TDS													

13 LOST LAKE XE16-39		4949	9126	50A06	34.2	31.3	3.4	9.2	5	W	2	3.80	130.3	316	17	0.65	23.7	
														331	13	0.49	15.2	
														RES	79	2.66	91.2	
13 NL XE16-30		4920	9128	50A06	24.8	9.2	3.6	2.5	4	W	4	2.11	52.3	131	25	0.53	13.1	
														331	13	0.27	6.8	
														RES	62	1.31	32.4	
13 NL XE26-04		4917	9120	50A06	77.7	44.4	1.7	26.1	6	W	12	6.08	472.4	091	24	1.46	113.4	
														131	25	1.52	118.1	
														331	13	0.79	61.4	
														RES	38	2.31	179.5	
17 PHILLIS LAKE XE15-12		4912	9125	50A06	228.4	18.1	5.7	3.2	8	W	4	2.36	539.0	131	25	0.59	134.8	
														331	13	0.31	70.1	
														RES	62	1.46	334.2	
13 SOUTH LAKE XE16-14		4921	9124	50A06	52.3	22.4	6.4	3.5	6	C	16	2.46	128.7	091	25	0.62	32.2	
														331	13	0.32	16.7	
														RES	62	1.53	79.8	
13 WABUSKA LAKE XE07-15		4926	9124	50A06	384.3	42.6	2.8	15.2	12	W	13	4.76	1829.3	091	24	1.14	439.0	
														131	25	1.19	457.3	
														324	32	1.52	585.4	
														RES	19	0.90	347.6	
13 WILLOW NARROWS LAKE XE17-03		4926	9126	50A06	632.1	40.8	2.7	15.1	12	W	5	4.75	3065.5	131	25	1.19	750.6	
														334	32	1.52	960.8	
														131	13	0.62	390.3	
														RES	30	1.42	500.8	
13 CHARTPOND LAKE XE46-24		4920	9122	50A07	22.4	22.6	5.4	3.4	2	W	0	2.43	56.9	331	15	0.32	7.4	
														RES	10	2.11	49.5	

TABLE 4: IGNAME DISTRICT SURVEYED LAKES SORTED BY NAME

LAKE	LAKE ID	LAKE NAME	LAKE TYPE	LAKE SIZE (AC)	LAKE DEPTH (FT)	LAKE SURFACE AREA (AC)	LAKE VOLUME (AC-FT)	LAKE PERIMETER (MI)	LAKE ELEVATION (FT)	LAKE COORDINATES	LAKE STATUS	LAKE COMMENTS
LAKE 1	0001	LAKE 1	LAKE 1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
LAKE 2	0002	LAKE 2	LAKE 2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LAKE 3	0003	LAKE 3	LAKE 3	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
LAKE 4	0004	LAKE 4	LAKE 4	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
LAKE 5	0005	LAKE 5	LAKE 5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
LAKE 6	0006	LAKE 6	LAKE 6	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
LAKE 7	0007	LAKE 7	LAKE 7	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
LAKE 8	0008	LAKE 8	LAKE 8	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
LAKE 9	0009	LAKE 9	LAKE 9	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
LAKE 10	0010	LAKE 10	LAKE 10	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
LAKE 11	0011	LAKE 11	LAKE 11	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
LAKE 12	0012	LAKE 12	LAKE 12	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
LAKE 13	0013	LAKE 13	LAKE 13	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0
LAKE 14	0014	LAKE 14	LAKE 14	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
LAKE 15	0015	LAKE 15	LAKE 15	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
LAKE 16	0016	LAKE 16	LAKE 16	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
LAKE 17	0017	LAKE 17	LAKE 17	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
LAKE 18	0018	LAKE 18	LAKE 18	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
LAKE 19	0019	LAKE 19	LAKE 19	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
LAKE 20	0020	LAKE 20	LAKE 20	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
LAKE 21	0021	LAKE 21	LAKE 21	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
LAKE 22	0022	LAKE 22	LAKE 22	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
LAKE 23	0023	LAKE 23	LAKE 23	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
LAKE 24	0024	LAKE 24	LAKE 24	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
LAKE 25	0025	LAKE 25	LAKE 25	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
LAKE 26	0026	LAKE 26	LAKE 26	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0
LAKE 27	0027	LAKE 27	LAKE 27	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0
LAKE 28	0028	LAKE 28	LAKE 28	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
LAKE 29	0029	LAKE 29	LAKE 29	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0
LAKE 30	0030	LAKE 30	LAKE 30	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
LAKE 31	0031	LAKE 31	LAKE 31	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0
LAKE 32	0032	LAKE 32	LAKE 32	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0
LAKE 33	0033	LAKE 33	LAKE 33	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0
LAKE 34	0034	LAKE 34	LAKE 34	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0
LAKE 35	0035	LAKE 35	LAKE 35	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
LAKE 36	0036	LAKE 36	LAKE 36	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0
LAKE 37	0037	LAKE 37	LAKE 37	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0
LAKE 38	0038	LAKE 38	LAKE 38	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0
LAKE 39	0039	LAKE 39	LAKE 39	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0
LAKE 40	0040	LAKE 40	LAKE 40	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
LAKE 41	0041	LAKE 41	LAKE 41	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0
LAKE 42	0042	LAKE 42	LAKE 42	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0
LAKE 43	0043	LAKE 43	LAKE 43	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
LAKE 44	0044	LAKE 44	LAKE 44	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
LAKE 45	0045	LAKE 45	LAKE 45	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
LAKE 46	0046	LAKE 46	LAKE 46	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0
LAKE 47	0047	LAKE 47	LAKE 47	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0
LAKE 48	0048	LAKE 48	LAKE 48	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0
LAKE 49	0049	LAKE 49	LAKE 49	49.0	49.0	49.0	49.0	49.0	49.0	49.0	49.0	49.0
LAKE 50	0050	LAKE 50	LAKE 50	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
LAKE 51	0051	LAKE 51	LAKE 51	51.0	51.0	51.0	51.0	51.0	51.0	51.0	51.0	51.0
LAKE 52	0052	LAKE 52	LAKE 52	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0
LAKE 53	0053	LAKE 53	LAKE 53	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0
LAKE 54	0054	LAKE 54	LAKE 54	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0
LAKE 55	0055	LAKE 55	LAKE 55	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
LAKE 56	0056	LAKE 56	LAKE 56	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0
LAKE 57	0057	LAKE 57	LAKE 57	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0
LAKE 58	0058	LAKE 58	LAKE 58	58.0	58.0	58.0	58.0	58.0	58.0	58.0	58.0	58.0
LAKE 59	0059	LAKE 59	LAKE 59	59.0	59.0	59.0	59.0	59.0	59.0	59.0	59.0	59.0
LAKE 60	0060	LAKE 60	LAKE 60	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
LAKE 61	0061	LAKE 61	LAKE 61	61.0	61.0	61.0	61.0	61.0	61.0	61.0	61.0	61.0
LAKE 62	0062	LAKE 62	LAKE 62	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0
LAKE 63	0063	LAKE 63	LAKE 63	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0
LAKE 64	0064	LAKE 64	LAKE 64	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0
LAKE 65	0065	LAKE 65	LAKE 65	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
LAKE 66	0066	LAKE 66	LAKE 66	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0
LAKE 67	0067	LAKE 67	LAKE 67	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0
LAKE 68	0068	LAKE 68	LAKE 68	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0
LAKE 69	0069	LAKE 69	LAKE 69	69.0	69.0	69.0	69.0	69.0	69.0	69.0	69.0	69.0
LAKE 70	0070	LAKE 70	LAKE 70	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
LAKE 71	0071	LAKE 71	LAKE 71	71.0	71.0	71.0	71.0	71.0	71.0	71.0	71.0	71.0
LAKE 72	0072	LAKE 72	LAKE 72	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0
LAKE 73	0073	LAKE 73	LAKE 73	73.0	73.0	73.0	73.0	73.0	73.0	73.0	73.0	73.0
LAKE 74	0074	LAKE 74	LAKE 74	74.0	74.0	74.0	74.0	74.0	74.0	74.0	74.0	74.0
LAKE 75	0075	LAKE 75	LAKE 75	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0
LAKE 76	0076	LAKE 76	LAKE 76	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.0
LAKE 77	0077	LAKE 77	LAKE 77	77.0	77.0	77.0	77.0	77.0	77.0	77.0	77.0	77.0
LAKE 78	0078	LAKE 78	LAKE 78	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0
LAKE 79	0079	LAKE 79	LAKE 79	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0
LAKE 80	0080	LAKE 80	LAKE 80	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
LAKE 81	0081	LAKE 81	LAKE 81	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0
LAKE 82	0082	LAKE 82	LAKE 82	82.0	82.0	82.0	82.0	82.0	82.0	82.0	82.0	82.0
LAKE 83	0083	LAKE 83	LAKE 83	83.0	83.0	83.0	83.0	83.0	83.0	83.0	83.0	83.0
LAKE 84	0084	LAKE 84	LAKE 84	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0
LAKE 85	0085	LAKE 85	LAKE 85	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0
LAKE 86	0086	LAKE 86	LAKE 86	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0
LAKE 87	0087	LAKE 87	LAKE 87	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0
LAKE 88	0088	LAKE 88	LAKE 88	88.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0
LAKE 89	0089	LAKE 89	LAKE 89	89.0	89.0	89.0	89.0	89.0	89.0	89.0	89.0	89.0
LAKE 90	0090	LAKE 90	LAKE 90	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
LAKE 91	0091	LAKE 91	LAKE 91	91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0	91.0
LAKE 92	0092	LAKE 92	LAKE 92	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0
LAKE 93	0093	LAKE 93	LAKE 93	93.0	93.0	93.0	93.0	93.0	93.0	93.0	93.0	93.0
LAKE 94	0094	LAKE 94	LAKE 94	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0
LAKE 95	0095	LAKE 95	LAKE 95	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
LAKE 96	0096	LAKE 96	LAKE 96	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0
LAKE 97	0097	LAKE 97	LAKE 97	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0
LAKE 98	0098	LAKE 98	LAKE 98	98.0	98.							

MNR DIS	SITE NAME	SURFACE			MEAN DEPTH	SPP CNT	C W	SPOF COW	POTENTIAL KG/HA/YR	YIELD KG/YR	SPECIES KG/HA/YR	YIELD KG/YR	
		LAT LONG	WSECT AREA	TOG AREA									
13	DARKWATER LAKE XF42-04	4951 9100	50409	310.7	3.4	9	W	5	3.36	1044.0	131 25 334 32 331 13 RES 30	0.84 1.08 0.44 1.01	261.0 234.1 135.7 313.2
		5008 9058	52409	243.7	5.0	6	W	5	2.75	683.9	131 25 334 32 331 13 RES 30	0.69 0.88 0.36 0.82	171.0 218.8 88.9 205.2
13	DIVIDED LAKE XF33-13	5000 9109	50409	486.2	5.7	14	W	5	2.73	1190.8	131 25 334 32 331 13 RES 30	0.68 0.87 0.35 0.82	397.7 381.1 154.8 357.2
		5007 9050	50409	460.5	7.7	7	W	13	2.08	957.8	091 24 131 25 334 32 331 13 RES 6	0.50 0.52 0.67 0.27 0.12	339.9 239.5 306.5 124.5 57.5
13	EMPRESS LAKE XF74-17	5000 9056	50409	85.6	5.6	7	W	5	2.67	229.1	131 25 334 32 331 13 RES 30	0.57 0.85 0.35 0.30	57.3 73.3 29.6 68.7
		5012 9047	50409	76.3	4.6	5	W	13	3.11	252.3	091 24 131 25 334 32 331 13 RES 6	0.75 0.78 1.00 0.40 0.18	57.0 59.3 75.9 30.8 14.2
13	FOS LAKE XF86-28	5012 9026	50409	237.9	3.2	7	W	13	2.91	959.2	091 24 131 25 334 32 331 13 RES 6	0.94 0.98 1.25 0.51 0.22	323.2 282.6 257.7 120.9 55.8

[illegible]

MNR DIS	SITE NAME	SURFACE			MEAN DEPTH	SPP CNT	C W	SPOE CON	POTENTIAL YIELD KG/HA/YR	SPECIES KG/HA/YR	YIELD KG/TP				
		LAT LONG	USHER	AREA								TDS			
13 MALTA LAKE XF34-14		5003 9106	50A09	201.3	34.0	3.7	9.2	7	W	5	3.90	763.8	131 25	0.85	191.7
													324 22	1.22	245.4
													331 13	0.49	99.7
													RES 30	1.14	230.0
13 NL XF54-09		5000 9053	50A09	99.1	18.1	8.6	2.1	13	C	24	1.95	193.2	081 25	0.49	48.3
													091 24	0.47	46.4
													RES 51	0.99	98.5
13 PENASSI LAKE XF23-10		4957 9115	50A09	1441.3	27.1	6.6	4.1	7	W	5	2.64	3805.0	091 24	0.63	912.2
													131 25	0.66	951.3
													334 32	0.84	1217.6
													331 13	0.34	494.7
												RES 6	0.16	238.3	
13 PIKE LAKE XF21-13		4943 9112	50A09	152.0	27.8	3.7	7.5	5	W	4	3.47	458.0	121 25	0.87	114.5
													331 13	0.45	59.5
													RES 62	2.15	264.0
13 POST LAKE XF52-20		4954 9047	50A09	437.5	43.5	3.2	13.6	13	W	5	4.53	1981.9	131 25	1.13	495.5
													334 32	1.45	634.2
													331 13	0.59	257.6
												RES 30	1.36	594.6	
13 QUEER LAKE XF41-24		4945 9059	50A09	382.5	28.8	3.2	9.0	17	W	13	3.76	1442.0	091 24	0.90	346.1
													131 25	0.94	360.8
													334 32	1.23	461.4
													331 13	0.49	187.5
												RES 6	0.23	86.5	
13 QUEST LAKE XF63-01		4954 9042	50A09	464.2	44.5	5.7	7.3	13	W	13	3.53	1562.7	091 24	0.85	367.8
													131 25	0.86	363.2
													334 32	0.13	490.5
													331 13	0.43	193.3
													RES 6	0.21	92.0

TABLE 4: IGA DISTRICT SURVEYED LAKES SORTED BY WATER

AND FISH COMMUNITY/YIELD REPORT 8

MNR DIS	SITE NAME	LAT LONG	Wshed AREA	SUREFACE	IDS	MEAN DEPTH	MEI	SPP CNT	C W	SPOF COM	POTENTIAL KG/HA/YP	YIELD KG/YR	SPP %	SPECIES KG/HA/YP	YIELD KG/YF
12 SHINY LAKE XE23-09		4955 9113	50A09	295.4	30.1	4.7	6.4	14	W	5	3.23	954.1	121 25	0.81	232.5
													324 32	1.02	305.3
													331 13	0.42	124.0
													RES 20	0.97	286.2
13 SQUAW LAKE XF74-04		5005 9033	50A09	898.5	29.6	5.7	5.2	13	W	5	2.94	2641.6	131 25	0.74	660.4
													334 32	0.94	845.3
													331 13	0.38	243.4
													RES 30	0.88	792.5
13 STURGEON LAKE XF32-05		5000 9045	50A09	21412.7	38.1	13.6	2.8	22	C	29	2.23	47750.3	081 A21	0.47	10031.6
													091 A20	0.45	9630.3
													131/132 A21	0.47	10031.6
													334/332 A27	0.60	12840.4
													331 A11	0.24	5216.4
13 TEN MILE LAKE XF34-02		5001 9104	50A09	486.4	21.5	5.5	3.9	11	W	13	2.53	1254.9	091 24	0.62	301.2
													131 25	0.65	313.7
													334 32	0.83	401.6
													331 13	0.34	163.1
													RES 6	0.15	75.3
13 VISTA LAKE XF74-21		4957 9034	50A09	1562.1	37.4	3.9	9.6	17	W	5	2.87	6045.3	131 25	0.97	1511.3
													334 32	1.24	1934.5
													331 13	0.50	785.9
													RES 30	1.16	1813.6
13 ZEN LAKE (NL) XF66-28		5012 9045	50A09	40.1	33.2	4.0	5.8	4	W	1	3.09	123.9	224 32	0.99	39.6
													RES 68	2.10	84.3
13 BUTLER LAKE (NL) WE89-19		4929 9150	50D01	30.4		7.1		6	C	32			089 25		
													RES 75		
13 HYNDMAN LAKE WE69-50		4936 9205	50D01	34.0	9.9	6.2	1.6	1	W	0	1.73	58.8	231 13	0.22	7.6
													RES 87	1.51	51.2

TABLE 4: IRRACE DISTINGUISHED ERRORS COMPARISON

NO BY	SITE NAME	LAT LONG	SURFACE AREA	TDS	MEAN DEPTH	MEI	SPP		SFDE POTENTIAL COM	YIELD KG/YR	SPP	SPECIES VEGET	YIELD KG/YR
							CNT	M					
13 ADAMTS-12 LAKE (ELMSTOCK) WE70-10		4940 9137	50402	135.0	11.0	2.8	11	0	29	2027.7	081 A21	0.51	367.4
											091 A20	0.51	367.4
											131 A21	0.51	367.4
											334 A27	0.51	367.4
											RES A 0	0.51	367.4
13 BALMORAL LAKE WE86-54		4918 9159	50414	294.0	14.0	6.1	7	0	30	589.8	081 A21	0.51	367.4
											131 A21	0.51	367.4
											331 A27	0.51	367.4
											RES A 0	0.51	367.4
											RES A 0	0.51	367.4
13 BASKET LAKE WE70-05		4943 9200	50402	455.0	25.6	5.9	13	0	29	11734.3	081 A21	0.51	367.4
											091 A20	0.51	367.4
											131 A21	0.51	367.4
											334 A27	0.51	367.4
											RES A 0	0.51	367.4
13 BEAK LAKE WE55-03		4915 9216	50412	524.3	17.7	7.7	12	0	21	1069.6	081 A21	0.51	367.4
											131 A21	0.51	367.4
											334 A27	0.51	367.4
											RES A 0	0.51	367.4
											RES A 0	0.51	367.4
13 BELL LAKE XF41-10		4948 9259	50409	4189.6	38.5	9.5	15	0	29	9590.1	081 A21	0.51	367.4
											091 A20	0.51	367.4
											131 A21	0.51	367.4
											334 A27	0.51	367.4
											RES A 0	0.51	367.4
13 BELMONT LAKE (L) WE56-45		4918 9132	50414	116.6	12.2	3.3	7	0	16	393.1	081 A21	0.51	367.4
											131 A21	0.51	367.4
											334 A27	0.51	367.4
											RES A 0	0.51	367.4
											RES A 0	0.51	367.4

APPENDIX C - COMMUNITY YIELD REPORT A

THE PREPARED REPORT A

SITE	SITE NAME	LAT LONG	WATER AREA	SURFACE		TDS	DEPTH	FISH		SPP	C	BIOE POTENTIAL		YIELD	SPP %	SPECIES		1980
				AREA	AREA			FEI	CRG			KG/HA/YR	KG/YR			1981-82	1983-84	
13	EQUUS LAKE	4914 9150	50810	38.2	14.5	5.8	5.5	5.5	6	0	4	2.11	80.6	181	25	4.53	4.53	11.1
														331	13	4.57	4.57	10.3
														RES	62	1.21	1.21	50.3
13	EQUUS LAKE	5005 9152	50809	324.5	30.2	11.0	3.3	9	0	29	2.23	723.5	170.7	081	A24	9.52	9.52	170.7
													183.3	091	A25	9.52	9.52	183.3
													172.7	131	A24	9.52	9.52	172.7
													218.4	334	A30	9.52	9.52	218.4
													0.0	RES	A 0	0.00	0.00	0.0
13	GULLIVER LAKE	4916 9153	50810	59.7	15.5	7.4	2.1	7	0	4	1.95	116.4	39.1	131	25	0.49	0.49	39.1
													15.1	331	13	0.25	0.25	15.1
													73.2	RES	62	1.21	1.21	73.2
													505.2	081	A21	0.34	0.34	505.2
13	GULLIVER LAKE	4910 9119	50805	1479.1	14.2	10.1	1.4	7	0	29	1.63	2410.9	482.2	091	A20	0.33	0.33	482.2
													506.3	131	A21	0.34	0.34	506.3
													150.9	334	A27	0.44	0.44	150.9
													265.2	331	A11	0.18	0.18	265.2
													0.0	RES	A 0	0.00	0.00	0.0
13	GUSTAVSON LAKE (HNL)	4937 9151	50802	144.6	22.0	7.6	3.9	6	0	20	2.26	326.8	81.7	081	25	0.57	0.57	81.7
													81.7	131	25	0.57	0.57	81.7
													42.5	331	13	0.29	0.29	42.5
													120.9	RES	37	0.84	0.84	120.9
13	HALL LAKE (HNL)	4942 9113	50804	9.7	100.9	7.0	14.4	2	0	32	4.65	45.1	11.3	080	25	1.16	1.16	11.3
													5.9	331	13	0.69	0.69	5.9
													28.0	RES	62	2.58	2.58	28.0
13	SUSSEX LAKE (HNL)	4921 9150	50814	104.2	13.9	4.2	1.1	8	0	16	2.49	250.1	62.5	081	25	0.60	0.60	62.5
													32.5	331	13	0.51	0.51	32.5
													155.1	RES	62	1.21	1.21	155.1

TABLE 5: IGFA DISTRICT SURVEYED LAKES SORTED BY COLOR CODE AND YIELD PER HECTARE FOR FISH COMMUNITY/YIELD REPORT 4

NR DIS	SITE NAME	SURFACE		TDS	DEPTH	MEI	SPP	C	SPOF POTENTIAL		SPP %	SPECIES	YIELD
		LAT LONG	WATER AREA						W	COM		KG/HA/YF	KG/YF
13 NL WE65-13	MOOSEWIDE LAKE	4915 9149	5PB10	178.8	20.1	11.8	1.7	8	C	17	1.78	312.3	79.6
											081 33	0.45	79.6
											334 33	0.57	101.9
											331 13	0.23	41.4
											RES 30	0.53	95.5
13 NL WE75-36	HAYMAGGUS LAKE (NL)	4917 9201	5PB13	126.3	15.0	8.8	1.7	12	C	21	1.78	224.2	56.2
											081 25	0.45	56.2
											131 25	0.45	56.2
											334 32	0.57	71.9
											331 13	0.23	29.2
											RES 5	0.09	11.2
13 NL WE95-01		4916 9145	5PB10	115.2	14.5	5.8	2.5	8	C	20	2.11	243.1	60.8
											081 25	0.53	60.8
											131 25	0.53	60.8
											RES 50	1.06	121.6
13 NL WE75-35		4916 9158	5PB13	149.5	18.5	7.4	2.5	4	C	17	2.11	315.4	78.9
											081 25	0.53	78.9
											334 32	0.68	100.9
											RES 43	0.91	135.6
13 NL WE85-63		4917 9152	5PB14	55.5	17.3	6.4	2.7	9	C	20	2.19	121.5	30.4
											081 25	0.55	30.4
											131 25	0.55	30.4
											331 13	0.28	15.8
											RES 37	0.81	45.0
13 NL WE86-34		4920 9153	5PB14	36.7	11.8	4.7	2.5	7	C	16	2.11	77.4	19.4
											081 25	0.52	19.4
											331 12	0.27	10.1
											RES 62	1.21	48.0
13 NL WE57-02		4926 9213	5PB01	154.4	14.6	6.1	2.4	8	C	21	2.06	321.2	80.3
											081 25	0.52	80.3
											131 25	0.52	80.3
											334 32	0.67	102.8
											331 13	0.23	41.8
											RES 5	0.10	16.1

TABLE 5: 1800 DISTRICT CONVERTED LAKES CONVEYED YIELD REPORT A

MNR DIS	SITE NAME	LAT LONG	WQHEID	SURFACE AREA		TDS	GSPH	MDI	SPP	C	SPOE	POTENTIAL	YIELD	SPP %	SPECIES	YIELD
				HECT	ACRES						CON	KG/HA/YR	KG/YR		KG/HA/YR	KG/YR
13 NL XE54-09		5000 9053	50A05	99.1	13.1	3.6	2.1	13	C	24	1.95	193.2	48.1	0.31	0.43	48.1
														0.91	0.47	43.4
														PES	0.92	93.5
13 O'TELL LAKE (NL) XE07-23		4925 9136	50A05	14.3	17.3	3.5	4.9	5	C	32	2.86	40.0	10.0	0.80	0.72	10.0
														PES	2.15	39.0
13 OSAGUAN LAKE WE97-18		4924 9149	50A05	371.4	33.1	4.8	4.6	2	C	16	2.78	1032.5	258.1	0.81	0.70	258.1
														RES	2.09	774.4
13 PHONY LAKE WE63-32		4916 9202	5PB13	458.8	15.4	8.1	1.9	16	C	28	1.87	858.0	214.5	0.81	0.47	214.5
														0.91	0.45	205.9
														131	0.47	214.5
														331	0.24	111.5
														RES	0.24	111.5
13 PAGUCHI LAKE (TROUT) XE09-01		4934 9122	50A05	2447.5	42.8	9.1	4.7	12	C	28	2.81	6877.5	1719.4	0.81	0.70	1719.4
														0.91	0.67	1650.6
														131	0.70	1719.4
														331	0.37	894.1
														RES	0.37	894.1
13 PLUTO LAKE (MUSKOGEE) WE90-14		4940 9139	50A02	159.5	30.3	13.5	1.5	6	C	17	1.63	268.0	67.0	0.81	0.42	67.0
														334	0.54	85.8
														331	0.32	34.8
														RES	0.50	80.4
13 POPEYE LAKE (NL) WE86-32		4920 9152	5PB14	103.8	12.7	9.1	1.4	6	C	16	1.63	169.2	42.3	0.81	0.41	42.3
														331	0.31	22.0
														RES	1.01	104.9
13 FALEIGH LAKE WE77-02		4925 9155	50B01	1698.9	16.6	10.4	1.6	6	C	48	1.73	2839.1	734.6	0.80	0.43	734.6
														0.81	0.43	734.6
														331	0.32	392.1
														RES	1.13	1087.5

TABLE 5: IGNACE DISTRICT SURVEYED LAKES SORTED BY COLDWATER AND WARMWATER

TABLE 5: IAGLR DISTRICT SURVEYED LAKES SORTED BY COLDWATER, WARMWATER, AND TROTHER SPECIES

L-43 D13	SITE NAME	SURFACE			MEAN		SPP CNT	C W	SPOF POTENTIAL		YIELD KG/YR	SPECIES		YIELD KG/YR	
		LAT LONG	WSHD AREA	TDS	DEPTH	WEI			COM	KG/HA/YR		SPP %	KG/HA/YR		
13 HEX (NL) XE08-22		4932 9130	50A05	71.5	38.7	2.6	14.9	10	W	5	4.72	337.5	131 25	1.18	84.4
													334 32	1.51	108.0
													331 13	0.61	43.9
													RES 30	1.42	101.2
13 HOOK LAKE WE79-02		4935 9154	50A03	621.8	21.8	2.9	7.5	9	W	5	3.47	2157.6	131 25	0.87	539.4
													334 32	1.11	690.4
													331 13	0.45	280.5
													RES 30	1.04	647.3
13 HUT LAKE XE11-03		4949 9121	50A04	456.7	37.0	3.7	16.0	13	W	15	3.95	1804.0	091 A22	0.85	390.1
													131 A23	0.89	406.3
													316 A15	0.60	276.5
													334 A29	1.14	520.1
13 HYNDHAM LAKE WE69-30		4936 9205	50D01	34.0	5.9	6.2	1.6	1	W	0	1.73	58.8	331 13	0.22	7.6
													RES 87	1.51	51.2
13 JAGGED LAKE XE73-23		4955 9037	50A09	94.7	40.0	1.7	23.5	5	W	5	5.80	549.3	131 25	1.45	137.3
													334 32	1.86	175.8
													331 13	0.75	71.4
													RES 30	1.74	164.8
13 JESSIE LAKE (NL) XE44-26		5003 9056	50A09	60.5	41.4	8.8	4.7	6	W	5	2.81	170.0	131 25	0.70	42.5
													334 32	0.90	54.4
													331 13	0.37	22.1
													RES 30	0.84	51.0
13 FAHLEBOGARA LAKE XE55-03		5012 9010	45B03	3547.9	23.7	3.2	7.4	19	W	13	3.45	12240.3	091 24	0.83	2937.7
													131 25	0.86	3060.1
													314 30	1.10	3916.9
													331 13	0.45	1591.2
												RES 6	0.21	734.4	

TABLE 5: FISH COMMUNITY DATA REPORT

WATER BODY	SITE NAME	LAT LONG	WATER DEPTH	SURFACE AREA	MEAN DEPTH	SPECIES COUNT	CATCH PER HOUR	POTENTIAL YIELD	SPECIES	YIELD					
13 MESS LAKE	WE21-02	4945 9446	50462	437.5	30.4	3.3	9.5	7	W	5	3.80	1776.5	131 25	0.95	444.1
													334 32	1.35	568.5
													331 13	0.49	330.9
													RES 30	1.14	532.0
13 MUD LAKE (NL)	WE29-14	4948 9117	50464	120.0	29.0	1.6	18.1	3	W	4	5.15	618.0	131 25	1.29	154.5
													RES 75	3.86	463.5
		4934 9153	50402	121.5	27.7	4.7	5.9	7	W	5	3.11	377.9	131 25	0.78	94.5
													334 32	1.00	120.9
13 NL	WE55-08	4915 9212	5PB12	33.3	20.5	1.8	11.4	3	W	5	4.19	139.5	RES 43	1.34	162.5
													RES 43	1.80	60.0
													131 25	1.05	34.9
													334 32	1.34	44.6
13 NL	WE55-13	4914 9216	5PB12	61.0	26.5	4.2	6.3	7	W	5	3.21	195.8	RES 43	1.80	60.0
													RES 43	1.80	60.0
													131 25	0.80	49.0
													334 32	1.03	62.7
13 NL	WE55-19	4913 9213	5PB10	100.7	16.2	9.5	1.7	6	W	4	1.78	179.2	331 13	0.23	23.3
													RES 62	1.10	111.1
													RES 62	1.10	111.1
													RES 62	1.65	58.1
13 NL	WE55-27	4914 9212	5PB10	35.1	20.8	5.0	4.2	2	W	4	2.67	93.7	131 25	0.67	22.4
													331 13	0.35	12.2
													RES 62	1.65	58.1
													RES 62	1.65	58.1
13 NL	WE55-29	4915 9212	5PB12	32.4	20.2	2.7	7.5	3	W	5	3.47	112.4	131 25	0.87	28.1
													334 32	1.11	36.0
													RES 42	1.49	48.3
													RES 42	1.49	48.3
13 NL	WE55-30	4914 9211	5PB12	15.0	14.2	2.7	5.3	6	W	5	2.97	44.6	131 25	0.74	11.2
													334 32	0.95	14.3
													331 13	0.29	5.9
													RES 30	0.89	13.4

DATE D13	SITE NAME	SURFACE		MEAN		SPP		C		SPOF POTENTIAL		YIELD		SPECIES		YIELD	
		LAT LONG	WSEED AREA	TBS	DEPTH	MEI	CNT	W	COM	KG/HA/Y3	KG/HA/Y3	KG/HA/YR	KG/HA/YR	KG/HA/YR	KG/HA/YR	KG/HA/YR	KG/HA/YR
13 NL WE55-33	4914 9210	5PB12	34.1	13.5	3.9	3.5	4	W	4	2.46	74.0	131 25	0.62	18.5	0.62	18.5	0.62
												331 13	0.32	9.6	0.32	9.6	0.32
												RES 62	1.53	45.9	1.53	45.9	1.53
13 NL WE57-20	4923 9214	5PB01	146.4	40.3	6.6	6.1	12	W	4	3.16	462.6	131 25	0.79	115.7	0.79	115.7	0.79
												331 13	0.41	60.1	0.41	60.1	0.41
												RES 62	1.95	286.8	1.95	286.8	1.95
13 NL WE58-20	4920 9211	5PB01	150.8	13.3	1.9	7.0	9	W	5	3.36	506.7	131 25	0.84	126.7	0.84	126.7	0.84
												334 32	1.08	162.1	1.08	162.1	1.08
												331 13	0.44	65.9	0.44	65.9	0.44
13 NL WE55-10	4915 9203	5PB10	64.8	53.0	3.9	13.6	10	W	5	4.53	293.5	121 25	1.13	73.4	1.13	73.4	1.13
												334 32	1.45	93.9	1.45	93.9	1.45
												331 13	0.59	36.2	0.59	36.2	0.59
13 NL WE55-39	4915 9209	5PB10	54.0	12.6	5.0	2.7	7	W	4	2.19	112.3	131 25	0.55	29.6	0.55	29.6	0.55
												331 13	0.28	15.4	0.28	15.4	0.28
												RES 62	1.36	73.3	1.36	73.3	1.36
13 NL WE65-43	4914 9209	5PB10	68.8	12.8	6.2	2.1	10	W	12	1.95	134.2	091 24	0.47	32.2	0.47	32.2	0.47
												131 25	0.49	33.5	0.49	33.5	0.49
												331 13	0.25	17.4	0.25	17.4	0.25
13 NL WE66-20	4919 9204	5PB13	109.7	17.7	2.3	7.7	12	W	5	3.51	395.0	131 25	0.82	96.3	0.82	96.3	0.82
												334 32	1.12	123.2	1.12	123.2	1.12
												331 13	0.46	50.1	0.46	50.1	0.46
13 NL WE66-41	4923 9202	5PB10	99.5	15.0	5.0	2.4	5	W	5	3.05	207.2	131 25	0.52	51.8	0.52	51.8	0.52
												334 32	0.67	66.3	0.67	66.3	0.67
												331 13	0.27	26.9	0.27	26.9	0.27
												RES 50	0.50	62.2	0.50	62.2	0.50

TABLE 5: INLAKE DISTRICT SURVEYED LAKES SORTED BY COLDWATER and WARMWATER AND FISH COMMUNITIES YIELD (PAGES 1-4)

五十二

TABLE 5: 1966 DISTRICT SURVEYED LAKES SORTED BY COLDWATER AND WARMWATER FISH COMMUNITY/YIELD RATIO

HNP SITE	SITE NAME	LAT LONG	SURFACE		TDS	WEAM		SPP CMT	C W	SPOE POTENTIAL COM	YIELD KG/HA/yr	SPECIES KG/HA/yr			
			WATER AREA	AREA		DEPTH	WIND								
11 REVELL LAKE WE67-04		4925 9000	50001	513.3	14.7	3.5	4.2	6	W	4	2.67	1413.2	101 35	0.97	353.9
													331 18	0.55	133.7
													RES 62	1.66	876.1
12 RIPPLE LAKE WE68-21		4926 9144	50463	135.4	33.8	2.5	15.5	6	W	5	4.51	610.0	131 25	1.20	502.5
													334 32	1.54	299.2
													331 13	0.63	105.3
13 ROBERTS LAKE WE66-06		4917 9143	50814	57.4	14.7	5.2	2.8	3	W	4	2.23	108.0	131 25	0.56	32.0
													RES 75	1.67	96.0
													334 32	1.02	136.2
13 ROBINSON LAKE WE68-24		4926 9131	50805	131.8	39.7	6.2	6.4	5	W	1	3.23	435.7	334 32	1.02	136.2
													331 13	0.42	55.3
													RES 55	1.78	234.1
13 ROUND LAKE (RL) WE67-04		4925 9145	50463	317.1	15.5	1.7	9.1	7	W	5	3.79	820.6	131 25	0.95	365.2
													334 32	1.21	262.6
													331 13	0.49	106.7
13 SALLY LAKE WE68-09		4926 9142	50465	335.9	59.2	5.5	9.2	7	W	5	3.96	1491.6	131 25	0.95	370.4
													334 32	1.22	474.1
													331 12	0.49	192.6
13 SAND BEACH LAKE (BL) WE68-05		4916 9214	50812	113.7	20.0	5.7	3.5	5	W	5	2.46	267.4	131 25	0.62	66.9
													334 32	0.79	85.6
													331 12	0.22	34.8
13 SPARK LAKE WE68-02		4917 9112	50467	183.3	23.3	2.3	13.0	4	W	5	4.44	813.4	131 25	1.11	203.4
													334 32	1.42	260.2
													331 12	0.58	105.7
													RES 30	0.74	59.2
													131 25	1.11	203.4
													334 32	1.42	260.2
													331 12	0.58	105.7
													RES 30	0.74	59.2
													131 25	1.11	203.4

MNR	SITE NAME	LAT LONG	WASHED AREA	SURFACE	TDS	DEPTH	WEI	SPP CMT	C	SPOF COM	POTENTIAL YIELD KG/YR	SPP N	SPECIES KG/HA/YR	YIELD KG/YR
EIS														
	13 SANDEAR LAKE XE08-07	4928 9135	50A05	1390.5	44.2	4.8	9.2	6	W	5	3.80	131 25 334 32 331 12 RES 30	0.95 1.23 0.49 1.14	1228.0 1569.2 637.5 1471.2
	13 SAVITSKY LAKE (NL) XE07-12	4928 9132	50A05	11.3	21.0	7.5	2.8	1	W	4	2.23	131 25 RES 75	0.56 1.67	6.3 19.9
	13 SAVOY LAKE XE45-01	4916 9102	50A08	548.8	20.0	4.0	5.0	10	W	13	2.89	091 24 131 25 334 32 331 13 RES 6	0.69 0.72 0.92 0.38 0.17	380.6 396.5 507.5 206.2 95.2
	13 SELWYN LAKE XE58-01	4927 9053	50A04	958.1	31.0	1.9	16.3	19	W	5	4.92	131 25 334/332 32 331 13 RES 30	1.23 1.57 0.64 1.48	1178.5 1508.4 612.8 1414.2
	13 SHANTY LAKE XE21-01	4949 9115	50A04	126.0	50.7	5.0	10.1	5	W	5	3.96	131 25 334 32 331 13 RES 30	0.99 1.27 0.51 1.19	124.8 159.7 64.9 149.7
	13 SHIKAG LAKE XF51-07	4945 9045	50A04	4526.7	27.4	2.4	11.4	12	W	15	4.19	091 A22 131 A23 316 A15 334/332 A29 331 A12 RES A 0	0.91 0.94 0.64 1.21 0.49 0.00	4101.0 4271.8 2904.8 5467.9 2221.3 0.0
	13 SHINY LAKE XE23-09	4955 9113	50A09	295.4	30.1	4.7	6.4	14	W	5	3.23	131 25 334 32 331 13 RES 30	0.21 1.02 0.42 0.92	238.5 305.3 104.0 286.0

TABLE 5: MORE DISTINGUISHED COMPLETED LINES

WATER QUALITY DATA

STATION	TEMPERATURE (°C)				PH				DO (mg/L)				TSS (mg/L)				TURBIDITY (NTU)			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
10 LITTLE WATERS LAKE	1004 0110	1004 0110	1004 0110	1004 0110	7.5	7.5	7.5	7.5	1.0	1.0	1.0	1.0	10.0	10.0	10.0	10.0	1.0	1.0	1.0	1.0
	1006 0110	1006 0110	1006 0110	1006 0110	7.5	7.5	7.5	7.5	1.0	1.0	1.0	1.0	10.0	10.0	10.0	10.0	1.0	1.0	1.0	1.0
	1008 0110	1008 0110	1008 0110	1008 0110	7.5	7.5	7.5	7.5	1.0	1.0	1.0	1.0	10.0	10.0	10.0	10.0	1.0	1.0	1.0	1.0
	1010 0110	1010 0110	1010 0110	1010 0110	7.5	7.5	7.5	7.5	1.0	1.0	1.0	1.0	10.0	10.0	10.0	10.0	1.0	1.0	1.0	1.0
11 WINTERING LAKE	1004 0110	1004 0110	1004 0110	1004 0110	7.5	7.5	7.5	7.5	1.0	1.0	1.0	1.0	10.0	10.0	10.0	10.0	1.0	1.0	1.0	1.0
	1006 0110	1006 0110	1006 0110	1006 0110	7.5	7.5	7.5	7.5	1.0	1.0	1.0	1.0	10.0	10.0	10.0	10.0	1.0	1.0	1.0	1.0
	1008 0110	1008 0110	1008 0110	1008 0110	7.5	7.5	7.5	7.5	1.0	1.0	1.0	1.0	10.0	10.0	10.0	10.0	1.0	1.0	1.0	1.0
	1010 0110	1010 0110	1010 0110	1010 0110	7.5	7.5	7.5	7.5	1.0	1.0	1.0	1.0	10.0	10.0	10.0	10.0	1.0	1.0	1.0	1.0
12 YOUNG LAKE	1004 0110	1004 0110	1004 0110	1004 0110	7.5	7.5	7.5	7.5	1.0	1.0	1.0	1.0	10.0	10.0	10.0	10.0	1.0	1.0	1.0	1.0
	1006 0110	1006 0110	1006 0110	1006 0110	7.5	7.5	7.5	7.5	1.0	1.0	1.0	1.0	10.0	10.0	10.0	10.0	1.0	1.0	1.0	1.0
	1008 0110	1008 0110	1008 0110	1008 0110	7.5	7.5	7.5	7.5	1.0	1.0	1.0	1.0	10.0	10.0	10.0	10.0	1.0	1.0	1.0	1.0
	1010 0110	1010 0110	1010 0110	1010 0110	7.5	7.5	7.5	7.5	1.0	1.0	1.0	1.0	10.0	10.0	10.0	10.0	1.0	1.0	1.0	1.0
13 TEE LAKE (OLD)	1004 0110	1004 0110	1004 0110	1004 0110	7.5	7.5	7.5	7.5	1.0	1.0	1.0	1.0	10.0	10.0	10.0	10.0	1.0	1.0	1.0	1.0
	1006 0110	1006 0110	1006 0110	1006 0110	7.5	7.5	7.5	7.5	1.0	1.0	1.0	1.0	10.0	10.0	10.0	10.0	1.0	1.0	1.0	1.0
	1008 0110	1008 0110	1008 0110	1008 0110	7.5	7.5	7.5	7.5	1.0	1.0	1.0	1.0	10.0	10.0	10.0	10.0	1.0	1.0	1.0	1.0
	1010 0110	1010 0110	1010 0110	1010 0110	7.5	7.5	7.5	7.5	1.0	1.0	1.0	1.0	10.0	10.0	10.0	10.0	1.0	1.0	1.0	1.0

80-993K

TABLE 6: PARTIALLY SURVEYED COLDWATER LAKES WITHIN THE IGNACE DISTRICT

WATERSHED	SITENAME	SURFACE				ESTIMATED			ESTIMATED		
		LAT	LONG	AREA	MEI ¹	POTENTIAL YIELD		SPP	%	SPECIES YIELD	
						KG/HA/YR	KG/YR			KG/HA/YR	KG/YR
5PB10	NORA LAKE WE75-20	4912	9150	1592.5	1.0	1.40	2229.5	081	A21	0.29	468.2
								091	A20	0.28	445.9
								131	A21	0.29	468.2
								334	A27	0.38	602.0
								331	A11	0.15	245.2
								RES	AO	0.00	0.0
5QA04	BERGLUND LAKE WE99-29	4936	9139	8.2	3.2	2.36	19.4	080	25	0.59	4.9
								RES	75	1.77	14.6
5QA06	LITTLE NOTMAN LAKE XE06-09	4922	9133	8.1	2.1	1.95	15.8	076	25	0.49	3.9
								RES	74	1.46	11.9
5QA09	SIX MILE LAKE XF53-04	4958	9053	1074.7	2.9	2.26	2428.8	081	A21	0.47	510.0
								091	A20	0.45	485.8
								131	A21	0.47	510.0
								334	A27	0.61	653.8
								331	A11	0.25	267.2
								RES	AO	0.00	0.0
5QD01	BUTLER LAKE WE88-19	4928	9149	34.0	4.4	2.73	92.8	080	25	0.68	23.2
								RES	75	2.05	69.6

¹ Weighted average MEI for the watershed from Table 10.

TABLE 7: PARTIALLY SURVEYED WARMWATER LAKES WITHIN THE IGNACE DISTRICT

WATERSHED	SITENAME	SURFACE				ESTIMATED			ESTIMATED		
		LAT	LONG	AREA	MEI ¹	POTENTIAL YIELD	SPP	%	SPECIES YIELD	YIELD	
		4919	9143	29.0	5.8	KG/HA/YR	KG/YR		KG/HA/YR	KG/YR	
5PB14	NL WE96-19					3.09	89.6	331 RES	0.40 2.69	11.6 78.0	
5PB14	NL WE86-09	4919	9145	86.1	5.8	3.09	266.0	131 331 RES	0.77 0.40 1.92	66.5 34.6 164.9	
5PB14	POP LAKE WE86-10	4922	9146	35.0	5.8	3.09	108.2	131 RES	0.77 2.32	27.1 81.1	
5QA05	WILLOW LAKE XF51-04	4947	9050	597.5	8.3	3.63	2168.9	091 131 316 334 RES	0.87 0.91 0.62 1.16 0.07	520.5 542.2 368.7 694.0 43.4	
5QA08	KEELE LAKE XE46-22	4919	9103	27.5	9.0	3.76	103.4	131 331 RES	0.94 0.49 2.33	25.8 13.4 64.1	

¹ Weighted average MEI for the watershed from Table 10.

TABLE 8: UNSURVEYED¹ COLDWATER LAKES WITHIN THE IGNACE DISTRICT

WATERSHED	SITENAME	LAT	LONG	SURFACE AREA	MEI ²	EST. POTENTIAL YIELD KG/HA/YR	KG/YR	SPECIES
4GB04	NL YF04-19	5003	9010	92.5	1.7	1.80	166.5	41.6
5QA04	NORTH ARABI LAKE XE59-31	4933	9052	81.1	3.2	2.36	191.4	47.8 61.2

1 Lakes with enough information to designate cold or warmwater status.

2 Weighted average MEI for the watershed from Table 10.

TABLE 9: UNSURVEYED¹ WARMWATER LAKES WITHIN THE IGNACE DISTRICT

WATERSHED	SITE NAME	LAT	LONG	AREA	MEI ²	KG/HA/YR	KG/YR	SPECIES
4GB02	BECKINGTON LAKE XF76-06	5011	9035	292.5	6.7	3.30	965.3	241.3 308.9
4GB02	RICHAN LAKE XF76-20	5012	9033	167.5	6.7	3.30	552.8	138.2 176.9
4GB03	WELLINGTON LAKE XF75-04	5010	9030	126.3	7.9	3.55	448.4	112.1 143.5
4GB04	GRID LAKE XE78-26	4932	9037	65.0	4.2	2.67	173.6	43.4 66.6
4GB04	MOBERLEY LAKE XE79-01	4934	9035	395.0	4.2	2.67	1054.6	263.6 337.5
5PB10	NL WE75-06	4912	9156	111.7	4.4	2.73	304.9	
5PB14	NL WE86-53	4918	9150	65.0	3.2	2.36	153.4	
5QA01	WILGRESS LAKE WF50-4	4940	9217	155.0	10.8	4.08	632.4	158.1 202.4
5QA02	JUNIPER LAKE WE99-07	4938	9142	106.8	7.2	3.40	363.1	90.8 116.2
5QA02	NL WE89-02	4939	9152	97.5	7.2	3.40	331.5	82.9 126.1
5QA02	NL WE79-03	4935	9159	195.8	7.2	3.40	665.7	166.4
5QA02	NL WE79-01	4934	9157	143.6	7.2	3.40	448.2	143.4
5QA02	REPENT LAKE WF80-13	4943	9153	92.5	7.2	3.40	314.5	78.6 100.6

1 Lakes with enough information to designate cold or warmwater status.

2 Weighted average MEI for the watershed from Table 10

TABLE 9: UNSURVEYED¹ WARMWATER LAKES WITHIN THE IGNACE DISTRICT

WATERSHED	SITENAME	LAT	LONG	SURFACE AREA	MEI ²	EST. POTENTIAL YIELD		SPECIES
						KG/HA/YR	KG/YR	
5QA02	SATURN LAKE WF90-08	4939	9142	86.3	7.2	3.40	293.4	72.4 93.9
5QA02	SHUTTER LAKE WF80-11	4941	9150	41.3	7.2	3.40	140.4	44.9
5QA03	LARD LAKE WF81-18	4947	9152	220.0	9.8	3.91	860.2	215.0 275.3
5QA04	AN LAKE XF00-07	4942	9136	106.0	8.8	3.73	395.4	
5QA04	ANTLER LAKE YF05-16	5007	9006	372.5	8.8	3.73	1389.4	347.4 444.6
5QA04	BALTIC LAKE XE79-11	4936	9039	95.0	8.8	3.73	354.4	113.4
5QA04	BEAR LAKE XF10-02	4942	9126	123.0	8.8	3.73	458.8	146.8
5QA04	BEAVERO LAKE XF20-19	4939	9112	27.5	8.8	3.73	102.6	25.6
5QA04	BENSTEAD LAKE XE29-05	4934	9116	111.2	8.8	3.73	414.8	103.7 132.7
5QA04	BING LAKE XF61-04	4949	9045	125.0	8.8	3.73	466.2	116.5 149.2
5QA04	BLACKBIRD LAKE XF72-32	4949	9036	55.0	8.8	3.73	205.2	65.7
5QA04	CANON LAKE XF40-18	4938	9056	80.0	8.8	3.73	298.4	74.6
5QA04	CHARNOCK LAKE XF20-06	4941	9119	45.0	8.8	3.73	167.9	42.0
5QA04	COLA LAKE XE59-01	4938	9052	140.0	8.8	3.73	522.2	
5QA04	DASENT LAKE XF70-01	4943	9036	280.0	8.8	3.73	1044.4	261.1 334.2
5QA04	DRIE LAKE XE29-06	4938	9117	25.0	8.8	3.73	93.3	N/A
5QA04	GLOVER LAKE(PASS) XF10-08	4940	9122	90.8	8.8	3.73	338.7	84.7 108.4
5QA04	GOOCH LAKE XF00-05	4942	9133	130.0	8.8	3.73	484.9	121.2 155.2
5QA04	GOSHEN LAKE XE58-03	4931	9047	197.5	8.8	3.73	736.7	184.2 235.7
5QA04	HEARLD LAKE WF90-03	4944	9140	62.5	8.8	3.73	233.1	58.3 74.6
5QA04	JACKPINE LAKE XE58-04	4928	9049	182.5	8.8	3.73	680.7	217.8
5QA04	JIM LAKE XF00-10	4943	9135	47.5	8.8	3.73	177.2	

TABLE 9: UNSURVEYED WARMWATER LAKES WITHIN THE IGNACE DISTRICT

WATERSHED	SITE NAME	LAT	LONG	AREA	MEI ²	KG/HA/YR	KG/YR	SPECIES
5QA04	LITTLE GOOCH LAKE XF00-06	4942	9135	47.5	8.8	3.73	177.2	44.3 56.7
5QA04	LITTLE SWANZY LAKE XF30-16	4940	9111	17.5	8.8	3.73	63.4	15.8
5QA04	MACKENZIE LAKE XF30-08	4941	9107	120.0	8.8	3.73	447.6	111.9 143.2
5QA04	MELNYK LAKE XE29-09	4938	9117	30.0	8.8	3.73	111.9	
5QA04	NL XE69-18	4936	9044	82.5	8.8	3.73	307.7	
5QA04	NL XF40-18	4939	9128	52.5	8.8	3.73	195.8	
5QA04	NL XE18-03	4933	9128	47.5	8.8	3.73	177.2	44.3
5QA04	NL XE19-12	4933	9127	35.8	8.8	3.73	133.5	33.4
5QA04	PALETTE LAKE XF50-09	4943	9053	675.0	8.8	3.73	2517.8	629.4 805.7
5QA04	PIPIO LAKE XF71-31	4944	9035	215.0	8.8	3.73	802.0	200.5 256.6
5QA04	REDWING LAKE XF71-41	4948	9034	102.5	8.8	3.73	382.3	95.6 122.3
5QA04	RICE LAKE XF11-01	4945	9128	112.5	8.8	3.73	419.6	104.9 134.3
5QA04	RUNNING DEER LAKE XF31-15	4946	9104	92.5	8.8	3.73	345.0	110.4
5QA04	RUXTON LAKE XF70-12	4941	9036	187.5	8.8	3.73	699.4	174.8 223.8
5QA04	SUCKER LAKE XF31-16	4947	9104	95.0	8.8	3.73	354.4	
5QA04	SURPRISE LAKE XF31-04	4945	9111	47.5	8.8	373	177.2	44.3 56.7
5QA04	SWAZNY LAKE XF30-15	4940	9111	42.5	8.8	3.73	158.5	39.6
5QA04	SWEDE LAKE(MARCHANT) XE38-02	4931	9106	47.5	8.8	3.73	177.2	44.3 56.7
5QA04	TAG LAKE XF20-20	4939	9115	35.0	8.8	3.73	130.6	32.6
5QA04	TAIL LAKE XE69-45	4932	9040	22.5	8.8	3.73	83.9	21.0 26.8
5QA04	TOWERS LAKE XF22-15	4953	9117	100.0	8.8	3.73	373.0	93.2 119.4
5QA04	UNAKA LAKE XF31-02	4943	9105	220.0	8.8	3.73	820.6	205.2 262.6
5QA04	VALEIRA LAKE(COLLINS) XE29-11	4938	9120	45.0	8.8	3.73	167.9	42.0

TABLE 9: UNSURVEYED¹ WARMWATER LAKES WITHIN THE IGNACE DISTRICT

WATERSHED	SITE NAME	LAT	LONG	AREA	MEI ²	KG/HA/YR	KG/YR	SPECIES
5QA04	WISH LAKE XF41-22	4947	9103	65.0	8.8	3.73	242.5	
5QA05	LITTLE PAGUCHI LAKE XE09-12	4933	9130	65.0	8.3	3.63	236.0	59.0
5QA05	SHELLFISH LAKE(SHELL) WE97-09	4918	9016	42.5	8.3	3.63	154.3	38.6
5QA06	DOWNHILL LAKE XE18-20	4928	9122	512.5	12.7	4.39	2249.9	562.5 720.0
5QA06	KATHLEEN LAKE XE15-26	4913	9123	235.0	12.7	4.29	1031.7	257.9 330.1
5QA06	KEN LAKE XE28-02	4930	9121	307.5	12.7	4.39	1349.9	332.5 432.0
5QA06	NORSEMAN LAKE XE25-08	4914	9113	47.5	12.7	4.39	208.5	66.7
5QA06	PORTAGE LAKE XE25-02	4912	9115	121.3	12.7	4.39	532.5	133.1 170.4
5QA07	HOPILA LAKE XE47-03	4925	9100	287.5	9.6	3.87	1112.6	278.2 356.0
5QA07	REBVA LAKE XE48-14	4929	9100	40.0	9.6	3.87	154.8	38.7 49.5
5QA08	MCNEVIN LAKE XE35-17	4915	9110	100.0	9.0	3.76	376.0	120.3
5QA09	CLAW LAKE XF52-18	4902	9122	183.8	9.0	3.76	691.1	131,334
5QA09	CLUSTER LAKE 1 XF32-18	4949	9105	30.0	9.0	3.76	112.8	131,334
5QA09	CLUSTER LAKE 2 XF32-17	4950	9105	42.5	9.0	3.76	159.8	131,334
5QA09	CLUSTER LAKE 3 XF32-15	4950	9104	32.5	9.0	3.76	122.2	131,334
5QA09	CONVER LAKE XF35-04	5008	9109	282.5	9.0	3.76	1062.2	131,334
5QA09	CORSICA LAKE XF34-12	5001	9107	107.5	9.0	3.76	404.2	131,334
5QA09	DIE LAKE XF46-05	5012	9059	240.0	9.0	3.76	902.4	

TABLE 9: UNSURVEYED¹ WARMWATER LAKES WITHIN THE IGNACE DISTRICT

WATERSHED	SITE NAME	LAT	LONG	AREA	MEI ²	KG/HA/YR	KG/YR	SPECIES
5QA09	FOWLER LAKE XF46-09	5012	9055	222.5	9.0	3.76	836.6	131,334
5QA09	GARY LAKE XF24-13	5000	9113	167.5	9.0	3.76	629.8	131,334
5QA09	GRAYSTONE LAKE XF33-19	4959	9103	112.5	9.0	3.76	423.0	131,334
5QA09	HANDCUFF LAKE XF34-21	5004	9110	320.0	9.0	3.76	1203.2	131,334
5QA09	JACKPOT LAKE XF32-14	4951	9104	105.0	9.0	3.76	394.8	131,334
5QA09	JIGGER LAKE XF31-23	4948	9105	165.0	9.0	3.76	620.4	131,334
5QA09	MCKEE LAKE XF33-23	4958	9105	152.5	9.0	3.76	573.4	131,334
5QA09	MCLEOD LAKE XF33-29	4957	9105	80.0	9.0	3.76	300.8	334
5QA09	PARIS LAKE XF44-53	5005	9103	262.5	9.0	3.76	987.0	334
5QA09	PRINCESS LAKE XF63-03	4958	9042	157.5	9.0	3.76	592.2	131,334
5QA09	SAHARA LAKE XF35-27	5009	9055	152.5	9.0	3.76	573.4	131,334
5QA09	TELEPHONE LAKE XF52-16	4950	9049	115.0	9.0	3.76	432.4	131,334
5QA09	THREE BAY LAKE XF44-52	5005	9055	75.0	9.0	3.76	282.0	131,334
5QA09	VALORA LAKE XF31-40	4948	9107	290.0	9.0	3.76	1090.4	131,334
5QA09	WILLET LAKE XF62-15	4953	9044	110.0	9.0	3.76	413.6	131,334

TABLE 10: AVERAGE MEI¹ VALUES FOR WATERSHED UNITS
WITHIN THE IGNACE DISTRICT

Watershed	Average Coldwater MEI (n) ²	Average Warmwater MEI (n) ²
4GB02	4.8 (2)	6.7 (11)
4GB03	- (0)	7.9 (11)
4GB04	1.7 (3)	4.2 (12)
5PB09	2.5 (67)	4.2 (7)
5PB10	1.0 (26)	4.4 (23)
5PB12	1.7 (37)	4.2 (5)
5PB13	2.1 (4)	4.7 (3)
5PB14	2.6 (7)	5.8 (44)
5PB17	2.0 (16)	6.8 (45)
5QA01	4.9 (11)	10.8 (59)
5QA02	2.8 (6)	7.2 (13)
5QA03	- (0)	9.8 (101)
5QA04	3.2 (4)	8.8 (28)
5QA05	4.6 (4)	8.3 (16)
5QA06	2.1 (5)	12.7 (7)
5QA07	2.1 (12)	9.6 (4)
5QA08	0.8 (3)	9.0 (11)
5QA09	2.9 (4)	9.0 (24)
5QD01	4.4 (14)	10.9 (28)

1 - Average MEI = Weighted mean of MEI values taken from all surveyed lakes (warm or cold) within that watershed unit (complete unit may include lakes outside of district boundary). In situations where watershed unit contained fewer than 3 surveyed lakes (eith warm or cold) and MEI value was required for further calculations (ie. productivity estimates) a weighted average from immediately surrounding watersheds was determined.

$$\frac{A_1(MEI)_1 + A_2(MEI)_2 + \dots + A_n(MEI)_n}{A_1 + A_2 + \dots + A_n}$$

2 - Number of surveyed lakes included in determining average MEI values.

TABLE 11: RIVER PRODUCTIVITY - COLDWATER RIVERS AND STREAMS, IGNACE DISTRICT

Watershed Name	Stream Length		Stream Area		Potential Yield		Species Present	Other Information
	(In District)	(km)	(In District)	MEI ¹	kg/ha/yr	kg/yr		
50A09 Groves Creek	2.9		7.3	17.94	5.0	36.5	Brook Trout	- stream survey information available
Watershed Totals	2.9		7.3		5.0	36.5	Northern Pike	- water and sediment sampling for contamination study
District Total Coldwater	2.9		7.3		5.0	36.5	Minnow Species	- biodegradable herbicide (below lethal for brook trout)

1 - MEI used is that recommended by Technical Task Force Minutes (85.03.06)

TABLE 12: RIVER PRODUCTIVITY - MAJOR WARMWATER RIVERS AND CREEKS, IAGRA DISTRICT

Watershed	Name	Stream Length (In District) (km)	Stream Area (In District) (ha)	MEI ¹	Potential Yield kg/ha/yr	Potential Yield kg/yr	Species Present	Other Information
4GB02	Flindt River	3.0	15.0	13.32	9.7	145.5	N/A	N/A
Watershed Totals		3.0	15.0		9.7	145.5		
4GB04	Brightsand River	5.5	37.5	8.48	9.7	363.8	N/A	N/A
	Ermine Creek	1.0	5.0			48.5	N/A	N/A
	Unnamed Stream (east of Arrow Lake)	1.5	7.5			72.8	N/A	N/A
Watershed Totals		8.0	50.0		9.7	485.1		
5PB10	Turtle River	19.5	297.5	8.82	9.7	2,885.8	Walleye (seasonal) ² Northern Pike White Sucker	N/A
Watershed Totals		19.5	297.5		9.7	2,885.8		
5PB13	Unnames Stream (west of Kinmoapiku Lake)	2.5	6.3	9.32	9.7	61.1	N/A	N/A
Watershed Totals		2.5	6.3	9.32	9.7	61.1		
5QA01	Suzanne River	5.3	25.0	21.70	9.7	242.5	N/A	N/A
	Tawatinaw River	1.7	17.5			169.8		
Watershed Totals		7.0	42.5		9.7	412.3		
5QA02	Basket River	7.8	50.0	14.36	9.7	485.0	N/A	N/A
	Juniper Creek	2.0	11.3			109.6		
	Unnamed Stream (south of Venus Lake)	0.4	1.0			9.7		
Watershed Totals		10.2	62.3		9.7	604.3		

TABLE 12: RIVER PRODUCTIVITY - MAJOR WATER RIVERS AND CREEKS

Watershed	Name	Stream Length (In District) (km)	Stream Area (In District) (ha)	MEI ¹	Potential Yield kg/ha/yr	Potential Yield kg/yr	Species Present	Other Information
5QA05	Agimak River	4.5	45.0	16.66	9.7	436.5	Walleye	- habitat inventory completed (invertebrates)
							Northern Pike White Sucker	- tested for acid sensitivity 1981 (mildly sensitive)
	Asinn Creek	3.2	6.4			62.1	Walleye (seasonal) ²	- tested for acid sensitivity 1981 (not sensitive)
	Camp Creek	2.0	10.0			97.0	Northern Pike	N/A
	Osaquan River	1.3	6.3			61.1	White Sucker	N/A
	Paguchi Creek	2.5	12.5			121.3		N/A
		13.5	80.2		9.7	778.1		
Watershed Totals								
5QA06	Gulliver River	42.0	240.0	25.36	9.7	2,328.0	Walleye Northern Pike White Sucker	N/A N/A N/A
	Notman Creek	3.0	15.0			145.5		N/A
		45.0	255.0		9.7	2,473.5		
Watershed Totals								
5QA08	English River ³ (part)	11.8 (87.3)	68.8 (2,037.6)	17.96	9.7	667.4 (19,570.7)	Walleye Northern Pike	- excellent spawning areas - stream survey information available
							Yellow Perch White Sucker	- Tested for mercury 1981 (classified "all species closed")
							Rock Bass Log-Perch Minnow Species incl. Johnny Darter	
	Scotch River	10.5	52.5			533.3		N/A

TABLE 12: RIVER PRODUCTIVITY - MAJOR WARMWATER RIVERS AND STREAMS, IGNACE DISTRICT

Watershed Name	Stream Length (In District) (km)	Stream Area (In District) (ha)	MEI ¹	Potential Yield kg/ha/yr	Potential Yield kg/yr	Species Present	Other Information
5QA09							
Bays River	4.5	30.0	1794	9.7	291.0	N/A	N/A
Bell Creek	5.0	40.0			388.0	N/A	N/A
Dominion Creek	6.5	49.0			475.3	N/A	N/A
Lake-of-Bays River	5.0	62.5			606.3	N/A	N/A
Nesbitt Creek	3.3	8.1			78.6	N/A	N/A
Sturgeon River	17.0	238.8			2,316.5	Walleye	- may have potential to support coldwater species
						Northern Pike	
Vista Creek	2.0	10.0			97.0	White Sucker	N/A
Unnamed Streams:							
1-south of Conver L.	3.3	8.1			78.6	N/A	N/A
-Sturgeon River Junction							
(5007 9107)	2.3	13.5			131.0	N/A	N/A
2-east of Handcuff L.							
(5003 9108)	3.8	15.3			148.4	N/A	N/A
3-northwest of							
Sturgeon L. North							
Arm (5013 9045)	2.0	10.0			97.0	N/A	N/A
4-northwest of Dry L.							
(4959 9116)							
Watershed Totals	54.7	485.3		9.7	4,707.6		
5QD01							
Mennin River	3.5	17.5	21.84	9.7	169.8	N/A	N/A
Revell River	24.4	12.2			118.3	Unknown	- may have potential to support coldwater species
Wabigoon River	20.8	125.0			1,212.5	Northern Pike	-habitat inventory completed (invertebrates)
						White sucker	
Watershed Totals	48.7	154.7		9.7	1,500.6		
TOTAL DISTRICT WARMWATER	370.8	3,725.4		9.7	36,137.2		

1 - MEI used is that recommended by Technical Task Force Minutes (85.03.06).
2 - Use river for spawning purposes.
3 - English River has sections in two separate watersheds in Ignace District
04 and 5QA09). Figures given are those

TABLE 13: SUMMARY OF RIVERS AND STREAMS BY WATERSHED UNITS
IGNACE DISTRICT

<u>Watershed</u>	<u>River Area (ha)</u>	<u>River Productivity (kg/yr)</u>
4GB02	15.0	145.5
4GB03	-	-
4GB04	50.0	485.1
5PB09	-	-
5PB10	297.5	2,885.8
5PB12	-	-
5PB13	6.3	61.1
5PB14	-	-
5PB17	-	-
5QA01	42.5	412.3
5QA02	62.3	604.3
5QA03	4.1	39.8
5QA04	2,151.2	20,866.8
5QA05	80.2	778.1
5QA06	255.0	2,473.5
5QA07	-	-
5QA08	121.3	1,176.7
5QA09	492.6	4,744.1
5QD01	<u>154.7</u>	<u>1,500.6</u>
District Totals	3,732.7	36,173.7

TABLE 14: ANNUAL SUMMARY OF COMMERCIAL FISH LICENCING, FISHING EFFORT, REVENUE AND HARVEST, BY LAKE
1960 - 1985

Lake Name and Licence #	Year	Number of Fishermen	Gear Licenced Amount	Type	Dates Valid	Species of Fish	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Reported Harvest (kg)	Value of Harvest (\$)
Abamategwia Lake	1980-1981 No licence issued										
	1979	1	1	Gill	Oct 15-Nov 30	Lake Trout Lake Whitefish Northern Pike Walleye	-	11.4	0 1,364 227 227	- - - -	- - - -
	1978	1	1	Gill	Oct 15-Nov 30	Lake Trout Lake Whitefish Northern Pike Sucker Walleye	20,000	11.4	0 no quota 227 - 227	18 73 64 36 272	- 83 49 - 570
	1977	1	1	Gill	Oct 15-Nov 30	Lake Trout Lake Whitefish Northern Pike Walleye Other	9,000	11.4	0 no quota 227 227 -	4 925 217 81 408	- 1,061 168 171 -
	1976	1	1	Gill	Oct 15-Nov 30	Lake Trout Lake Whitefish Northern Pike Walleye	-	11.4	0 no quota 227 227	- - - -	- - - -
	1975	1	1	Gill	Oct 15-Nov 30	Northern Pike Walleye Other	-	11.4	5% of catch 5% of catch no quota	- - -	- - -
	1974	1	1	Gill	Oct 15-Nov 30	Northern Pike Walleye Other	-	11.4	5% of catch 5% of catch no quota	- - -	- - -

Lake Name and Licence #	Year	Number of Fishermen	Gear Licenced Amount	Type	Dates Valid	Species of Fish	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Reported		Value of Harvest (\$)	
										Harvest (kg)	Harvest (kg)		
	1973	1	1	Gill	Oct 15-Nov 30	Northern Pike Walleye Other	-	11.4	5% of catch 5% of catch no quota	-	-	-	
	1972	Information not available											
	1971	1	1	Gill	Oct 15-Nov 30	Lake Trout Lake Whitefish Northern Pike Walleye	N/A	11.4	no quota 5% of catch 5% of catch	0 1,309 191 27	-	N/A N/A N/A	
	1970	1	1	Gill	Oct 15-Nov 30	Lake Trout Lake Whitefish Northern Pike Walleye Other	N/A	11.4	no quota 5% of catch 5% of catch	0 2,363 589 136 8800	-	990 130 144 -	
	1969	1	1	Gill	Oct 15-Nov 30	Lake Trout Northern Pike Walleye	N/A	11.4	5% of catch 5% of catch	0 -	-	-	
	1968	1	1	Gill	Oct 15-Nov 30	Lake Trout Lake Whitefish Northern Pike Walleye	N/A	11.4	no quota 5% of catch 5% of catch	0 1,252 109 -	-	497 29 -	
	1967	1	1	Gill	Oct 15-Nov 30	Lake Trout Northern pike Walleye	N/A	11.4	5% of catch 5% of catch	0 N/A N/A N/A	-	N/A N/A N/A	
	1966	Information not available											
	1965	N/A	N/A		N/A	Lake Trout Lake Whitefish	N/A	N/A	N/A	5 1,457	5 647	5 647	
	1964	N/A	N/A		N/A	Lake Whitefish Northern Pike	N/A	N/A	N/A	3,368 14	1,782 3	1,782 3	

Lake Name and Licence #	Year	Number Of Fishermen	Gear Licenced Amount	Type	Dates Valid	Species of Fish	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Reported Harvest (kg)	Value of Harvest (\$)
Barrel Lake	1985	No licence issued									
	1984	1	1	Gill	July	Lake Whitefish Northern Pike Walleye	N/A N/A N/A	N/A N/A N/A	2,721 45 45	N/A N/A N/A	N/A N/A N/A
	1983	1	1	Gill	July	Lake Whitefish Northern Pike Walleye Sucker Cisco	9,616	N/A	2,721 45 45	1,361 60 9 199 280	1,110 53 21 35 74
	1982	1	1	Gill	July	Lake Whitefish Northern Pike Walleye Sucker Cisco Burbot	13,378	N/A	2,721 45 45	1,901 71 0 315 261 104	1,676 70 0 0 69 0
	1981	1	1	Gill	July	Lake Whitefish Northern Pike Walleye Cisco Sucker	18,000	11.4	2,727 45 45 - -	2,586 29 9 - 323	3,079 41 25 46 99
	1980	1	1	Gill	July	Lake Whitefish Northern Pike Walleye Cisco Sucker Burbot	30,000	11.4	2,727 45 45 - - -	3,056 54 29 592 663 77	4,042 0 0 327 146 0
	1979	1	1	Gill	June 19-June 30	Lake Whitefish Northern Pike Walleye Lake Herring Sucker Burbot	9,146	11.4	2,727 45 45 - - -	2,909 43 17 181 196 15	3,636 0 0 100 35 0

Lake Name and Licence #	Year	Number of Fishermen	Gear Licenced		Dates Valid	Species of Fish	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Reported Harvest (kg)	Value of Harvest (\$)
			Amount	Type							
	1973	1	1	Gill	June 10-June 30	Lake Whitefish Northern Pike Walleye Lake Herring Sucker Burbot	30,000	11.4	no quota 45 45 - - -	3,590 42 41 716 268 31	4,353 0 0 395 47 0
	1970-77	Information not available									
	1969	N/A	N/A		N/A	Lake Whitefish Walleye Sucker	N/A	N/A	N/A	517 53 152	399 37 -
	1968	Information not available									
	1967	N/A	N/A		N/A	Lake Whitefish Walleye Sucker	N/A	N/A	N/A	2,121 25 686	1,075 11 28
	1966	1	1	Gill	Oct - Nov	Lake Trout Lake Whitefish Northern Pike Walleye Other	N/A	11.4	- - 5% of catch 5% of catch -	15 3,111 - 94 1,542	14 1,715 - 79 -
	1965	1	1	Gill	Oct 15-Nov 30	Northern Pike Walleye	N/A	11.4	5% of catch 5% of catch	N/A N/A	N/A N/A
	1960-64	Information not available									
Basket Lake	1985	1	1	Gill	July 15-Aug 15	Lake Trout Lake Whitefish Northern Pike Walleye Sucker Burbot	1,463	11.4	0 3,194 227 113 - -	- 273 73 34 12 32	- 301 0 0 3 0

Lake Name and Licence #	Year	Number of Fishermen	Gear Licenced Amount	Type	Dates Valid	Species of Fish	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Reported Harvest (kg)	Value of Harvest (\$)
	1984	1	1	Gill	July 15-Aug 15	Lake Trout Lake Whitefish Northern Pike Walleye Sucker Burbot	1,920	11.4	0 4,545 227 114 - -	- 595 185 27 13 19	- 525 163 60 2 -
	1983	1	1	Gill	July 15-Aug 15	Lake Trout Lake Whitefish Northern Pike Walleye Sucker Cisco Burbot	6,400	11.4	0 4,545 227 114 - - -	- 663 121 21 103 19 463	- 511 106 71 18 - -
	1982	1	1	Gill	July 15-Aug 15	Lake Trout Lake Whitefish Northern Pike Walleye	549	11.4	0 4,545 227 114	- 43 27 8	- 33 30 16
	1981	1	1	Gill	July 15-Aug 15	Lake Trout Lake Whitefish Northern Pike Walleye	-	11.4	0 4,545 227 114	- - - -	- - - -
	1980	1	1	Gill	July 15-Aug 15	Lake Trout Lake Whitefish Northern Pike Walleye	-	11.4	0 4,545 227 114	- - - -	- - - -
	1979	1	1	Gill	Oct 15-Nov 30	Lake Trout Lake Whitefish Northern Pike Walleye Sucker Burbot	16,463	11.4	0 4,545 455 227 - -	- 2,481 446 217 1,209 523	- 3,009 541 599 0 0
	1978	1	1	Gill	Oct 15-Nov 30	Lake Trout Lake Whitefish	-	11.4	0 4,545	- -	- -

Lake Name and Licence #	Year	Number of Fishermen	Gear Licenced		Dates Valid	Species of Fish	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Reported Harvest (kg)	Value of Harvest (\$)
			Amount	Type							
1977		1	1	Gill	Oct 15-Nov 30	Lake Trout	-	11.4	0	-	-
						Lake Whitefish	-	-	4,545	-	-
						Northern Pike	-	-	455	-	-
						Walleye	-	-	227	-	-
1976		1	1	Gill	Oct 15-Nov 30	Lake Trout	-	11.4	0	-	-
						Lake Whitefish	-	-	4,545	-	-
						Northern Pike	-	-	455	-	-
						Walleye	-	-	227	-	-
1975		1	1	Gill	Oct-Nov	Lake Whitefish	17,561	11.4	3,091	2,966	2,289
						Northern Pike	-	-	455	332	235
						Walleye	-	-	227	220	361
						Sucker	-	-	-	326	42
						Burbot	-	-	-	236	0
1974		1	1	Gill	-	Lake Whitefish	69,512	11.4	no quota	1,576	1,738
						Northern Pike	-	-	682	315	243
						Walleye	-	-	682	184	304
						Sucker	-	-	-	122	0
						Burbot	-	-	-	50	0
1973		1	1	Gill	-	Northern Pike	-	11.4	682	-	-
						Walleye	-	-	682	-	-
1972 Information not available											
1971		1	1	Gill	-	Lake Whitefish	-	11.4	no quota	464	-
						Northern Pike	-	-	682	327	-
						Walleye	-	-	682	136	-
1970		1	1	Gill	-	Lake Trout	-	11.4	0	-	-
						Lake Whitefish	-	-	no quota	4,438	1,010
						Northern Pike	-	-	682	142	115
						Walleye	-	-	682	1,001	367
						Sucker	-	-	-	2,200	-
						Other	-	-	-	1,814	-

Lake Name and Licence #	Year	Number of Fishermen	Gear Licenced		Dates Valid	Species of Fish	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Reported Harvest (kg)	Value of Harvest (\$)
			Amount	Type							
1978-79 No licence issued											
1977	1	1	1	Gill	Oct 15-Nov.	Lake Whitefish Northern Pike Walleye	-	14.0.	no quota 227 455	- - -	- - -
1976	1	1	1	Gill	Oct 15-Nov	Lake Whitefish Northern Pike Walleye	-	14.0	no quota 227 455	- - -	- - -
1975	1	1	1	Gill	Oct 15-Nov	Lake Whitefish Northern Pike Walleye Sucker Burbot	4,207	14.0	no quota 227 455 - -	154 307 1,005 281 14	90 101 1,064 0 0
1974	1	1	1	Gill	-	Lake Whitefish Walleye	-	14.0 (combined catch)	4,545	- -	- -
1973	1	1	1	Gill	-	Lake Whitefish Walleye Northern Pike Sucker Burbot	10,244	14.0 (combined catch)	4,545 - - -	570 359 306 231 79	314 348 86 0 0
1972	1	1	1	Gill	July	Lake Trout Lake Whitefish Burbot Other	N/A	14.0	136 2,727 - -	136 - 82 2	90 - 0 0
1971	1	1	1	Gill	-	Lake Trout Lake Whitefish Walleye Northern Pike Sucker Burbot	N/A	11.4 (combined catch)	136 4,545 - - -	111 110 - 237 116 14	59 61 - 57 0 0

Lake Name and Licence #	Year	Number of Fishermen	Gear Licenced		Dates Valid	Species of Fish	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Reported Harvest (kg)	Value of Harvest (\$)
			Amount	Type							
	1970	1	1	Gill	-	Lake Trout	N/A	11.4	136	180	110
						Lake Whitefish			4,545	1,853	1,111
						Walleye			(combined catch)	535	548
						Northern Pike			-	942	226
						Sucker			-	227	-
						Burbot			-	64	-
						Lake Trout	N/A	11.4	136	48	53
						Lake Whitefish			4,545	1,313	867
						Walleye			(combined catch)	208	222
						Northern Pike			-	523	167
						Sucker			-	227	-
						Burbot			-	45	-
	1968	1	1	Gill	-	Lake Trout	N/A	11.4	136	24	27
						Lake Whitefish			4,545	113	50
						Walleye			(combined catch)	448	345
						Northern Pike			-	88	27
						Sucker			-	168	-
						Burbot			-	41	-
	1967	1	1	Gill	-	Lake Trout	N/A	11.4	136	136	150
						Lake Whitefish			4,545	1,305	603
						Walleye			(combined catch)	209	161
						Northern Pike			-	447	120
						Sucker			-	277	-
						Burbot			-	207	-
	1966	1	1	Gill	-	Lake Trout	-	11.4	136	-	-
						Lake Whitefish			4,545	-	-
						Walleye			(combined catch)	-	-
						Lake Trout			136	136	75
						Lake Whitefish			4,545	1,603	554
	1965	1	1	Gill	-	Walleye			(combined catch)	1,224	648
						Northern Pike			-	232	26
						Other			-	953	0

Lake Name and Licence #	Year	Number of Fishermen	Gear Licenced		Dates Valid	Species of Fish	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Reported Harvest (kg)	Value of Harvest (\$)
			Amount	Type							
1964	1	1	1	Gill	-	Lake Trout	N/A	11.4	136	-	-
						Lake Whitefish		4,545	514	175	
						Walleye		(combined catch)	1,128	641	
						Northern Pike		-	372	82	
						Sucker		-	680	0	
						Burbot		-	86	0	
1963	1	1	1	Gill	-	Lake Trout	N/A	11.4	136	136	123
						Lake Whitefish		4,545	165	63	
						Walleye		(combined catch)	1,854	1,369	
						Northern Pike		-	1,721	436	
						Sucker		-	816	0	
						Burbot		-	227	0	
1962	1	1	1	Gill	-	Lake Trout	N/A	11.4	136	94	33
						Lake Whitefish		4,545	684	241	
						Walleye		(combined catch)	380	201	
						Northern Pike		-	233	51	
						Sucker		-	272	0	
						Burbot		-	94	0	
1961	1	1	1	Gill	-	Lake Trout	-	11.4	136	-	-
						Lake Whitefish		4,545	-	-	
						Walleye		(combined catch)	-	-	
						Lake Trout		11.4	136	177	125
						Lake Whitefish		4,545	1,114	472	
						Walleye		(combined catch)	905	549	
1960	1	1	1	Gill	-	Lake Trout	N/A	11.4	136	177	125
						Lake Whitefish		4,545	1,114	472	
						Walleye		(combined catch)	905	549	
						Northern Pike		-	652	173	
						Sucker		-	236	0	
						Burbot		-	184	0	
Indian Lake 1985	1	1	1	Gill	June/Nov	Lake Trout	3,932	11.4	50	16	-
						Lake Whitefish		4,536	1,542	2,040	
						Northern Pike		124	-	-	
						Walleye		124	113	225	
						Sucker		-	507	-	
						Burbot		-	83	-	

Licence #	Year	Fishermen	Amount	Type	Dates Valid	Fish	Effort (m)	Size (cm)	Quota (kg)	Harvest (kg)	Harvest (\$)
Northern Pike	1984	1	1	GIII	June/Nov	Lake Trout	7,315	11.4	50	69	-
						Lake Whitefish			4,545	4,380	4,829
						-					
						Walleye			124	136	478
						Sucker			-	189	-
						Burbot			-	1,302	-
	1983	1	1	GIII	June/Nov	Lake Trout	3,200	11.4	0	42	-
						Lake Whitefish			4,545	3,606	2,782
						Northern Pike			455	-	-
						Walleye			227	6	9
						Sucker			-	63	-
						Burbot			-	96	-
						Other			-	1	-
	1982	1	1	GIII	June/Nov	Lake Trout	14,173	11.4	0	22	-
						Lake Whitefish			4,545	4,627	5,100
						Northern Pike			455	22	22
						Walleye			227	12	-
						Sucker			-	196	-
						Burbot			-	485	-
						Other			-	53	-
	1981	1	1	GIII	June/Nov	Lake Trout	N/A	11.4	0	45	99
						Lake Whitefish			4,545	4,727	5,627
						Northern Pike			455	-	-
						Walleye			227	-	-
						Sucker			-	332	103
						Burbot			-	422	37
	1980	1	1	GIII	June/Nov	Lake Trout	10,610	11.4	0	52	0
						Lake Whitefish			4,545	3,908	5,600
						Northern Pike			455	-	-
						Walleye			227	-	-
						Sucker			-	247	0
						Burbot			-	773	0
	1979	1	1	GIII	June/Nov	Lake Trout	549	11.4	0	24	0
						Lake Whitefish			4,545	4,025	5,486
						Northern Pike			455	-	-
						Walleye			-	-	-
						Burbot			-	-	0

Licence #	Year	Fishermen	Amount	License Type	Dates Valid	Fish	Effort (m)	Size (cm)	Quota (kg)	Harvest (kg)	Harvest (\$)
	1978	1	1	Gill	June/Nov	Lake Trout Lake Whitefish Northern Pike Walleye	-	11.4	0 no quota 455 227	- - - -	- - - -
	1977	1	1	Gill	June/Nov	Lake Trout Lake Whitefish Northern Pike Walleye Sucker Burbot	40,793	11.4	0 no quota 455 227 - -	61 7,348 - - 549 1,937	0 3,100 - - 97 0
	1976	1	1	Gill	June/Nov	Lake Trout Lake Whitefish Northern Pike Walleye Sucker Burbot Other	1,098	11.4	0 6,868 455 227 - - -	- 7,187 - - 5 739 59	- 5,338 - - 0 0 47
	1975	1	1	Gill	June/Nov	Lake Trout Lake Whitefish Northern Pike Walleye Sucker Burbot Other	4,116	11.4	0 no quota 682 (combined catch) - - - -	- 8,523 2 - 154 901 95	- 9,456 0 - 0 0 0
1971-74	No licence issued						N/A	N/A	N/A		3
1970		N/A	N/A		N/A	Lake Trout Lake Whitefish Northern Pike Walleye Lake Herring Sucker Burbot				4 3,586 1,584 1,580 121 15,561 4,472	1,307 334 1,379 2 - -

Licence #	Year	Of Fishermen	Gear Licenced Amount	Type	Dates Valid	Species of Fish	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Reported Harvest (kg)	Harvest (\$)
1969	1969	N/A	N/A	N/A	N/A	Lake Trout	N/A	N/A	N/A	34	34
						Lake Whitefish				5,391	3,120
						Northern Pike				1,424	400
						Walleye				1,272	1,248
						Lake Herring				244	54
						Sucker				5,681	-
1968	1968	N/A	N/A	N/A	N/A	Burbot				745	-
						Lake Whitefish	N/A	N/A	N/A	219	121
						Northern Pike				1,049	277
						Walleye				209	138
						Sucker				544	-
						Burbot				113	-
1967	1967	N/A	N/A	N/A	N/A	Lake Whitefish	N/A	N/A	N/A	4,157	2,036
						Walleye				1,021	563
						Sucker				805	-
						Burbot				274	-
						Lake Whitefish	N/A	N/A	N/A	6,609	3,643
						Northern Pike				1,093	289
1966	1966	N/A	N/A	N/A	N/A	Walleye				2,234	1,970
						Lake Herring				356	-
						Sucker				-1,810	-
						Burbot				429	-
						Lake Trout	N/A	N/A	N/A	41	45
						Lake Whitefish				4,448	2,450
1965	1965	N/A	N/A	N/A	N/A	Northern Pike				778	221
						Walleye				1,368	1,796
						Lake Herring				116	0
						Sucker				1,102	0
						Burbot				272	0
						Lake Whitefish	N/A	N/A	N/A	6,269	2,988
1964	1964	N/A	N/A	N/A	N/A	Northern Pike				52	14
						Walleye				292	226
						Sucker				1,810	0
						Burbot				562	0
						Lake Whitefish	N/A	N/A	N/A	41	45
						Northern Pike				4,448	2,450

Licence #	Year	Fishermen	Amount	Species	Dates Valid	Fish	Effort (m)	Size (cm)	Quota (kg)	Harvest (kg)	Harvest (\$)	
Kukukus Lake	1977-81	Information not available										
	1976	N/A	N/A		N/A	Lake Whitefish Northern Pike Walleye Other	N/A	N/A	N/A	376 87 286 171	182 27 296 0	
	1975	Information not available										
	1974	1	1	Gill	-	Lake Whitefish Northern Pike Walleye	-	10.2	3,182 2,273 3,636	- - -	- - -	
	1973	1	1	Gill	-	Lake Whitefish Northern Pike Walleye	123,476	10.2	3,182 2,273 3,636	- - -	- - -	
	1972	1	1	Gill	-	Lake Whitefish Northern Pike Walleye Other	-	11.4	3,182 2,273 3,636 -	433 338 1,496 585	210 104 1,551 0	
	1971	1	1	Gill	-	Lake Whitefish Northern Pike Walleye Other	-	11.4	3,182 2,273 3,636 -	83 526 1,042 494	40 128 902 0	
	1970	1	1	Gill	-	Lake Whitefish Northern Pike Walleye Other	-	11.4	3,182 2,273 3,636 -	91 952 1,633 1,250	40 210 1,668 -	
	1969	1	1	Gill	-	Lake Whitefish Northern Pike Walleye Sucker Other	-	11.4	3,182 2,273 3,636 - -	695 2,249 2,561 104 1,211	441 759 2,690 14 -	

Licence #	Year	Of Fishermen	Gear Licenced Amount	Type	Dates Valid	Species of Fish	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Reported Harvest (kg)	Value of Harvest (\$)
1968		1	1	Gill	-	Lake Whitefish	-	11.4	3,182	381	135
						Northern Pike	-		2,273	1,600	531
						Walleye	-		3,636	2,248	1,914
						Sucker	-		-	1,031	64
1967		1	1	Gill	-	Lake Whitefish	-	11.4	3,182	1,354	445
						Northern Pike	-		2,273	1,768	491
						Walleye	-		3,636	5,211	3,519
						Sucker	-		-	589	-
1966		1	1	Gill	-	Other	-		-	1,072	-
						Lake Whitefish	-	11.4	3,182	-	-
						Northern Pike	-		2,273	1,292	380
						Walleye	-		3,636	1,109	1,059
1965		1	1	Gill	-	Other	-		-	1,404	-
						Lake Whitefish	-	11.4	3,182	457	109
						Northern Pike	-		2,273	1,778	424
						Walleye	-		3,636	3,318	2,532
1964		1	1	Gill	-	Sucker	-		-	816	0
						Other	-		-	465	0
						Lake Whitefish	-	11.4	3,182	-	95
						Northern Pike	-		2,273	2,121	424
1963		1	1	Gill	-	Walleye	-		3,636	3,779	2,327
						Sucker	-		-	1,980	0
						Lake Whitefish	-	11.4	3,182	-	-
						Northern Pike	-		2,273	386	68
1962		1	1	Gill	-	Walleye	-		3,636	3,836	2,651
						Lake Whitefish	-	11.4	3,182	605	199
						Northern Pike	-		2,273	772	137
						Walleye	-		3,636	1,546	334
1961		1	1	Gill	-	Sucker	-		-	302	0
						Lake Whitefish	-	11.4	no quota	281	82
						Northern Pike	-		no quota	859	203
						Walleye	-		3,182	2,904	1,601

Licence #	Year	of Fishermen	Gear Li. ced Amount	Type	Dates Valid	Species of Fish	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Reported Harvest (kg)	Harvest (\$)
	1960	1	1	Gill	-	Walleye	-	11.4	3,182	N/A	N/A
Lake-of-Bays	1985	1	1	Gill	Jan - Apr/ July - Dec	Lake Trout	1,829	11.4	45	1	-
						Lake Whitefish			2,770	61	20
						Northern Pike			45	3	-
						Walleye			45	-	-
						Sucker			-	3	-
	1984	1	1	Gill	Jan - Apr/ July - Dec	Lake Trout	4,572	11.4	45	42	215
						Lake Whitefish			2,770	308	339
						Northern Pike			45	39	-
						Walleye			45	-	-
						Other			-	250	-
	1983	1	1	Gill	Jan - Apr/	Lake Trout	N/A	N/A	no quota	N/A	N/A
						Lake Whitefish			4,545	-	-
						Northern Pike			45	-	-
						Walleye			45	-	-
	1982	1	1	Gill	Jan - Apr/	Lake Trout	N/A	N/A	no quota	-	-
						Lake Whitefish			4,545	-	-
						Northern Pike			45	-	-
						Walleye			45	-	-
	1981	1	1	Gill	July	Lake Trout	10,200	11.4	no quota	11	25
						Lake Whitefish			4,545	445	529
						Northern Pike			45	15	18
						Walleye			45	-	-
						Sucker			-	49	15
						Burbot			-	7	1
	1980	1	1	Gill	July	Lake Whitefish	15,000	11.4	4,545	1,157	1,550
						Northern Pike			45	32	3
						Walleye			45	-	-
						Sucker			-	44	13

Licence #	Year	of Fishermen	Gear Licenced Amount	Type	Dates Valid	Species of Fish	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Reported Harvest (kg)	Value of Harvest (\$)
1979	1	1	Gill	July	Lake Whitefish	113,277	11.4	4,545	1,162	1,793	
					Northern Pike			45	23	0	
					Walleye			45	14	0	
					Sucker			-	43	3	
					Burbot			-	16	0	
1971-78	No information available										
1970	N/A	N/A	N/A	N/A	Lake Trout	N/A	N/A	N/A	6	4	
					Lake Whitefish				107	12	
					Northern Pike				191	12	
					Walleye				1,351	1,400	
1969	N/A	N/A	N/A	N/A	Lake Trout	N/A	N/A	N/A	152	152	
					Lake Whitefish				1,300	554	
					Northern Pike				875	305	
					Walleye				2,287	2,351	
					Other				1,264	2	
1968	N/A	N/A	N/A	N/A	Lake Trout	N/A	N/A	N/A	25	20	
					Lake Whitefish				430	191	
					Northern Pike				1,240	392	
					Walleye				-1,746	1,444	
					Sucker				415	55	
					Other				953	-	
1967	N/A	N/A	N/A	N/A	Lake Trout	N/A	N/A	N/A	198	153	
					Lake Whitefish				1,823	755	
					Northern Pike				2,395	665	
					Walleye				2,150	1,508	
1966	N/A	N/A	N/A	N/A	Northern Pike	N/A	N/A	N/A	621	174	
					Walleye				614	568	
					Other				413	-	
1965	N/A	N/A	N/A	N/A	Lake Trout	N/A	N/A	N/A	71	55	
					Lake Whitefish				894	597	
					Northern Pike				1,475	541	
					Walleye				1,445	1,167	

Licence #	Year	Number of Fishermen	Gear Licenced Amount	Type	Dates Valid	Species of Fish	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Reported Harvest (kg)	Value of Harvest (\$)
Mameigwess Lake	1964	N/A	N/A		N/A	Lake Trout	N/A	N/A	N/A	54	42
						Lake Whitefish				142	53
						Northern Pike				1,465	298
						Walleye				2,734	1,883
						Other				728	0
1963		N/A	N/A		N/A	Lake Trout	N/A	N/A	N/A	63	46
						Lake Whitefish				503	196
						Northern Pike				993	217
						Walleye				2,817	1,780
1962		N/A	N/A		N/A	Lake Whitefish	N/A	N/A	N/A	501	165
						Northern Pike				323	58
						Walleye				1,268	641
						Sucker				577	0
1961		N/A	N/A		N/A	Lake Trout	N/A	N/A	N/A	14	11
						Lake Whitefish				1,411	435
						Northern Pike				1,723	333
						Walleye				2,649	1,494
						Sucker				1,059	0
1960		N/A	N/A		N/A	Lake Trout	N/A	N/A	N/A	273	192
						Lake Whitefish				1,891	562
						Northern Pike				722	174
						Walleye				2,507	1,589
						Sucker				941	0
Mameigwess Lake	1985	No Licence issued									
	1984	1	1	Gill	Jan - Mar Oct - Dec	Lake Trout	2,560	11.4	80	62	116
						Lake Whitefish			5,897	2,560	3,387
						Northern Pike			227	444	392
						Walleye			150	73	103
1983		1	1	Gill	Jan - Mar Oct - Dec	Sucker			-	435	77
						Lake Trout	9,144	11.4	80	-	-
						Lake Whitefish			5,897	3,929	3,032
						Northern Pike			227	93	72
						Walleye			514	14	45

Licence #	Year	of Fishermen	Gear Licenced Amount	Type	Dates valid	Fish	Effort (m)	Size (cm)	Quota (kg)	Harvest (kg)	Harvest (\$)
1982		1	1	GIII	Jan - Mar Oct - Dec	Lake Trout	15,545	11.4	80	93	-
						Lake Whitefish			5,897	7,057	6,224
						Northern Pike			227	259	257
						Walleye			544	54	130
						Sucker			-	895	-
1981		1	1	GIII	Oct 15-Nov 30	Burbot			-	50	-
						Lake Trout	155,000	11.4	0	-	-
						Lake Whitefish			5,909	3,310	4,535
						Northern Pike			227	210	240
						Walleye			227	381	1,033
1980		1	1	GIII	Oct 15-Nov 30	Sucker			-	1,022	310
						Burbot			-	25	2
						Lake Trout	29,634	11.4	0	44	0
						Lake Whitefish			5,909	6,301	5,945
						Northern Pike			227	123	190
1979		1	1	GIII	Oct 15-Nov 30	Walleye			227	208	0
						Sucker			-	1,356	0
						Lake Trout	-	11.4	0	-	-
						Lake Whitefish			4,545	-	-
						Northern Pike			227	-	-
1978		1	1	GIII	Oct 15-Nov 30	Walleye			227	-	-
						Lake Trout	59,268	11.4	0	23	0
						Lake Whitefish			no quota	5,026	6,316
						Northern Pike			227	54	42
						Walleye			227	-	-
1977		1	1	GIII	Oct 15-Nov 30	Sucker			-	231	0
						Lake Trout	31,098	11.4	0	32	0
						Lake Whitefish			no quota	6,296	737
						Northern Pike			227	54	56
						Walleye			227	-	-
1976		1	1	GIII	Oct 15-Nov 30	Sucker			-	122	0
						Lake Trout	-	11.4	0	-	-
						Northern Pike			227	-	-
		1	1	GIII		Walleye			227	-	-
									-	-	-

Lake Name and Licence #	Year	Number of Fishermen	Gear Licenced Amount	Licence Type	Dates Valid	Species of Fish	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Reported Harvest (kg)	Value of Harvest (\$)
1973-75		1	1	Gill	Oct-Nov	Lake Trout Northern Pike Walleye	- no fishing reported	11.4	0 5% of catch 5% of catch	- - -	- - -
1972	No licence issued										
1971		1	1	Gill	Oct-Nov	Lake Trout Lake Whitefish Northern Pike Walleye	-	11.4	0 no quota 5% of catch 5% of catch	- 5,891 355 109	- - - -
1970		1	1	Gill	Oct-Nov	Lake Trout Lake Whitefish Northern Pike Walleye Other	-	11.4	0 no quota 5% of catch 5% of catch -	- 6,940 721 191 6,940	- 3,978 159 189 -
1969		1	1	Gill	Oct-Nov	Lake Trout Lake Whitefish Northern Pike Walleye	-	11.4	0 no quota 5% of catch 5% of catch	95 3,637 245 1,080	14 5,947 70 820
1968		1	1	Gill	Oct-Nov	Lake Trout Lake Whitefish Northern Pike Walleye	-	11.4	0 no quota 5% of catch 5% of catch	- 8,990 327 -	- 4,360 86 -
1967		1	1	Gill	Oct-Nov	Lake Trout Lake Whitefish Northern Pike Walleye	-	11.4	5% of catch no quota 5% of catch 5% of catch	440 8,890 244 -	485 4,316 65 -
1966		N/A	N/A		N/A	Lake Trout Lake Whitefish Northern Pike	N/A	N/A	N/A	109 6,617 160	108 4,376 42

Licence #	Year	Fishermen	Amount	Type	Dates Valid	Fish	Effort (m)	Size (cm)	Quota (kg)	Harvest (kg)	Harvest (\$)
1968		N/A	N/A		N/A	Lake Whitefish Northern Pike Walleye Lake Herring Sucker	N/A	N/A	N/A	288 157 430 51 635	153 49 379 18 -
1967		N/A	N/A		N/A	Lake Whitefish Northern Pike Walleye Lake Herring Sucker	N/A	N/A	N/A	117 337 1,134 54 1,361	57 104 829 14 -
1966		N/A	N/A		N/A	Lake Whitefish Northern Pike Walleye Lake Herring Sucker	N/A	N/A	N/A	343 29 137 128 454	136 8 121 28 -
1965		N/A	N/A		N/A	Lake Whitefish Northern Pike Walleye Sucker	N/A	N/A	N/A	109 425 533 203	43 112 541 36
1964		N/A	N/A		N/A	Lake Whitefish Northern Pike Walleye	N/A	N/A	N/A	53 921 1,301	22 216 886
1963	Information not available										
1962		N/A	N/A		N/A	Lake Whitefish Northern Pike Walleye Sucker Other	N/A	N/A	N/A	21 330 1,957 839 5	8 73 1,075 0 1
1961		N/A	N/A		N/A	Lake Whitefish Northern Pike Walleye Sucker	N/A	N/A	N/A	347 341 763 163	120 86 489 0 1

Licence #	Year	No. of Fishermen	Gear Licenced Amount	Type	Dates valid	Species	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Harvest	
										(kg)	(\$)
1965		N/A	N/A	N/A	N/A	Lake Trout	N/A	N/A	23	25	
						Lake Whitefish			1,551	355	
						Northern Pike			54	12	
						Sucker			136	0	
						Burbot			70	0	
1964		N/A	N/A	N/A	N/A	Lake Trout	N/A	N/A	44	38	
						Lake Whitefish			332	452	
						Northern Pike			77	14	
						Sucker			440	0	
						Burbot			356	0	
1963 Information not available											
1962		N/A	N/A	N/A	N/A	Lake Trout	N/A	N/A	79	70	
						Lake Whitefish			3,363	1,040	
						Northern Pike			644	142	
						Sucker			583	0	
						Burbot			397	0	
1961		N/A	N/A	N/A	N/A	Lake Trout	N/A	N/A	59	53	
						Lake Whitefish			3,002	1,346	
						Northern Pike			248	54	
						Sucker			379	0	
						Burbot			265	0	
1960		N/A	N/A	N/A	N/A	Lake Trout	N/A	N/A	68	60	
						Lake Whitefish			3,168	1,137	
						Northern Pike			576	114	
						Sucker			1,388	0	
						Burbot			236	0	
Penassl Lake											
1971	1972-81	1	1	Gill	-	Lake Trout	-	11.4	0	-	
						Lake Whitefish			2,273	402	405
						Northern Pike			227	148	131
						Walleye			227	32	105
						Sucker			-	386	-

Licence #	Year	of Fishermen	Gear Licenced Amount	Type	Dates Valid	Species Not Fish	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Reported Harvest (kg)	Harvest (\$)
	1970	1	1	Gill	-	Lake Trout Lake Whitefish Northern Pike Walleye	-	11.4	0 2,273 227 227	- 364 195 90	- 239 90 98
	1969	1	1	Gill	-	Lake Trout Lake Whitefish Northern Pike Walleye Sucker	-	11.4	0 2,273 227 227 -	- 816 251 123 408	- 153 95 136 -
	1968	1	1	Gill	-	Lake Trout Lake Whitefish Northern Pike Walleye	-	11.4	0 2,273 227 227	- 1,467 222 210	- 1,091 75 186
	1967	1	1	Gill	-	Lake Trout Lake Whitefish Northern Pike Walleye	-	11.4	227 1,364 909 1,591	- - - -	- - - -
	1966	Information not available									
	1965	N/A	N/A		N/A	Lake Trout Lake Whitefish Northern Pike Walleye Sucker	N/A	N/A	N/A	242 1,383 939 1,709 392	267 581 249 1,507 0
	1964	N/A	N/A		N/A	Lake Trout Lake Whitefish Northern Pike Walleye Other	N/A	N/A	N/A	15 1,361 907 1,814 522	8 600 240 1,000 0
	1963	N/A	N/A		N/A	Lake Trout Northern Pike Walleye	N/A	N/A	N/A	7 851 1,713	4 217 1,441
	1962	N/A	N/A		N/A	Northern Pike Walleye	N/A	N/A	N/A	897 2,373	125 947

Licence #	Year	of Fishermen	Gear Licenced Amount	Type	Dates Valid	Specie/Fish	Fishing Effort (m)	Size (cm)	Quota (kg)	Harvest (kg)	Harvest (\$)	
Paguchi Lake	1960	N/A	N/A		N/A	Lake Whitefish Northern Pike Walleye Sucker Other	N/A	N/A		1,119 1,421 2,696 1,639 445	529 395 1,925 0 107	
	1985	1	1	GIII	Jan-April July-Dec	Lake Trout Lake Whitefish Northern Pike Sucker Burbot	3,383	11.4	45 2200 45 - -	54 2,186 4 59 181	- 2,892 - - -	
	1984	1	1	GIII	Jan-April July-Dec	Lake Trout Lake Whitefish Northern Pike Sucker Burbot	8,778	11.4	45 2200 45 - -	26 2,313 7 941 748	- 2,040 - - -	
	1983	1	1	GIII	Jan-April July-Dec	Lake Trout Lake whitefish Northern Pike Burbot	2,469	11.4	45 2200 45 -	3 258 - 680	- 200 - -	
	1982	1	1	GIII	Jan-April July-Dec	Lake Trout Lake Whitefish Northern Pike Sucker Burot	731	11.4	45 2200 45 - -	9 181 - 14 9	- 160 - - -	
	1981	1	1	GIII	Jan-April	Lake Trout Northern Pike Sucker Burbot Other	7,500	11.4	45 45 - - -	- 66 100 29 285	- 75 31 3 0	
	1980	1	1	GIII	Oct 18-Nov 15	Lake Trout Lake Whitefish Northern Pike	-	11.4	45 3,182 45	- - -	- - -	

Licence #	Year	of Fishermen	Gear Licenced Amount	Type	Dates valid	Species of Fish	Fishing Effort (m)	Mean Size (cm)	Quota (kg)	Harvest (kg)	Harvest (\$)
1979		1	1	Gill	Oct 18-Nov 15	Lake Trout	8,415	11.4	45	43	95
						Lake Whitefish				3,375	4,092
						Northern Pike				290	320
						Sucker				136	24
						Burbot				43	0
1978		1	1	Gill	Oct 18-Nov 15	Lake Trout	4,253	11.4	45	-	-
						Lake Whitefish				3,338	3,680
						Northern Pike				41	36
						Sucker				147	26
						Burbot				318	0
1970-77 Information not available											
1969		N/A	N/A	N/A	N/A	Lake Whitefish	N/A	N/A	N/A	1,898	921
						Northern Pike				570	151
						Sucker				2,160	-
						Burbot				458	-
1968		N/A	N/A	N/A	N/A	Lake Trout	N/A	N/A	N/A	75	74
						Lake Whitefish				2,037	1,123
						Northern Pike				101	27
						Lake Herring				5	1
						Sucker				1,814	-
1967		N/A	N/A	N/A	N/A	Burbot	N/A	N/A	N/A	227	-
						Lake Trout				100	88
						Lake Whitefish				3,073	1,694
						Northern Pike				50	13
1966		N/A	N/A	N/A	N/A	Sucker	N/A	N/A	N/A	415	-
						Lake Trout				113	125
						Lake Whitefish				3,187	1,756
						Northern Pike				45	12
						Sucker	386	-			
						Burbot	200	-			

Licence #	Year	of Fishermen	Gear Licenced Amount	Type	Dates valid	Species Fish	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Harvest (kg)	Harvest (\$)
	1963	Information not available									
	1962	N/A	N/A		N/A	Lake Whitefish Northern Pike Walleye Sucker	N/A	N/A	N/A	53 486 2,372 499	19 107 1,569 0
	1961	N/A	N/A		N/A	Lake Whitefish Northern Pike Walleye Lake Herring Sucker Other	N/A	N/A	N/A	204 12 113 1,050 329 193	63 3 63 278 0 34
	1960	N/A	N/A		N/A	Lake Whitefish Northern Pike Walleye Lake Herring Sucker Burbot Other	N/A	N/A	N/A	86 945 2,666 963 1,260 98 492	39 259 1,925 170 57 0 109
Sesegaganaga Lake	1972-1981	Information not available									
	1971	N/A	N/A		N/A	Lake Trout Lake Whitefish Northern Pike Walleye Sucker Burbot Other	N/A	N/A	N/A	54 120 109 916 798 95 15	36 61 29 303 0 0 0
	1970	N/A	N/A		N/A	Lake Trout Lake Whitefish Northern Pike Walleye Lake Herring Sucker Burbot	N/A	N/A	N/A	26 132 581 2,014 26 1,012 198	20 60 127 2,141 - - -

Licence #	Year	of Fishermen	Licence Amount	Amount	Dates Valid	Fish	Effort (m)	Size (cm)	Quota (kg)	Harvest (kg)	Harvest (\$)
1969		N/A	N/A	N/A	N/A	Lake Trout	N/A	N/A	N/A	74	74
						Lake Whitefish				559	361
						Northern Pike				1,005	422
						Walleye				2,957	3,727
						Sucker				1,030	-
1968		N/A	N/A	N/A	N/A	Burbot				282	-
						Lake Trout				29	25
						Lake Whitefish				501	207
						Northern Pike				1,034	416
						Walleye				2,524	3,957
1967		N/A	N/A	N/A	N/A	Lake Herring				73	8
						Sucker				1,022	-
						Burbot				349	-
						Lake Trout				39	34
						Lake Whitefish				160	62
1966		N/A	N/A	N/A	N/A	Northern Pike				827	253
						Walleye				1,799	2,052
						Sucker				1,064	-
						Burbot				451	-
						Lake Trout				44	41
1965		N/A	N/A	N/A	N/A	Lake Whitefish				186	73
						Northern Pike				1,277	335
						Walleye				2,223	2,371
						Lake Herring				24	-
						Sucker				642	-
1965		N/A	N/A	N/A	N/A	Burbot				131	-
						Other				271	-
						Lake Trout				92	79
						Lake Whitefish				169	65
						Northern Pike				1,005	245
1965		N/A	N/A	N/A	N/A	Walleye				3,842	3,403
						Sucker				2,053	0
						Burbot				127	0
						Other				410	0

Licence #	Year	Fishermen	Deal Amount	Type	Dates Valid	Fish	Effort (m)	Size (cm)	Quota (kg)	Harvest (kg)	Harvest (\$)
1964		N/A	N/A		N/A	Lake Trout	N/A	N/A	N/A	63	49
						Lake Whitefish				135	48
						Northern Pike				1,162	255
						Walleye				3,413	2,549
						Sucker				1,399	0
1963		N/A	N/A		N/A	Burbot				72	0
						Other				30	0
						Lake Trout	N/A	N/A	N/A	73	60
						Lake Whitefish				93	38
						Northern Pike				956	211
1962		N/A	N/A		N/A	Walleye				2,531	2,003
						Sucker				1,455	0
						Burbot				114	0
						Other				28	1
						Lake Trout	N/A	N/A	N/A	2	2
1961		N/A	N/A		N/A	Lake Whitefish				1,244	538
						Northern Pike				1,563	353
						Walleye				3,817	2,329
						Sucker				1,427	0
						Burbot				59	0
1960		N/A	N/A		N/A	Lake Trout	N/A	N/A	N/A	45	30
						Lake Whitefish				135	45
						Northern Pike				714	171
						Walleye				1,855	1,079
						Sucker				1,023	0
1960		N/A	N/A		N/A	Burbot				62	2
						Other				13	0
						Lake Trout	N/A	N/A	N/A	27	18
						Lake Whitefish				146	56
						Northern Pike				479	118
1960		N/A	N/A		N/A	Walleye				1,783	1,031
						Sucker				1,198	0
						Burbot				48	0
						Other				51	1

Licence #	Year	of Fishermen	No Licence Issued	Gear Licenced Amount	Type	Dates Valid	Species Fish	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Harvest	Harvest	
											(kg)	(\$)	
Shikag Lake	1978-81.												
	1977	1		1	GIII	July-Oct	Lake Whitefish Northern Pike Walleye	no fishing reported	11.4	4,545 0 227	- - -	- - -	
	1976	1		1	GIII	July-Oct	Lake Whitefish Northern Pike Walleye Sucker Other	46,280	11.4	4,545 455 909 - -	154 269 197 567 86	92 96 206 0 28	
	1975	1		1	GIII	-	Lake Whitefish Northern Pike Walleye Sucker Other	9,512	11.4	4,545 no quota 3,182 - -	322 493 999 1,284 426	177 158 1,060 0 138	
	1974	1		1	GIII	-	Lake Whitefish Northern Pike Walleye Sucker Other	1,463	11.4	4,545 no quota 3,182 - -	863 465 2,112 463 228	507 150 2,177 0 88	
	1973	1		1	GIII	-	Lake Whitefish Northern Pike Walleye Sucker	6,310	11.4	4,545 no quota 3,182 -	152 135 1,342 467	80 42 1,302 0	
	1972	1		1	GIII	-	Lake Whitefish Northern Pike Walleye	-	11.4	4,545 no quota 3,182	- - -	- - -	
	1971	1		1	GIII	-	Lake Whitefish Northern Pike Walleye	-	11.4	4,545 no quota 3,182	- - -	- - -	
	1970	1		1	GIII	-	Lake Whitefish Northern Pike Walleye	-	11.4	4,545 no quota 3,182	- - -	- - -	
	1969	1		1	GIII	-	Lake Whitefish	-	11.4	4,545	196	1.07	

Licence #	Year	of Fishermen	Gear Licenced Amount	Type	Dates Valid	Species Fish	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Harvest (kg)	Harvest (\$)
	1968	1	1	GIII	-	Northern Pike Walleye Lake Herring Sucker	-	-	no quota 3,182 - -	1,036 769 210 869	347 956 49 57
						Lake Whitefish Northern Pike Walleye Lake Herring Sucker Other	-	11.4	4,545 no quota 3,182 - - -	851 504 1,745 1,042 1,605 181	484 168 1,657 276 4 -
	1967	1	1	GIII	-	Lake Whitefish walleye	-	11.4	4,545 3,182	- -	- -
	1966	1	1	GIII	-	Lake Whitefish Northern Pike Walleye Lake Herring Sucker Other	-	11.4	4,545 no quota 3,182 - - -	811 1,140 1,403 167 991 885	322 290 1,135 44 54 -
	1965	1	1	GIII	-	Lake Whitefish Northern Pike Walleye Sucker Other	-	11.4	4,545 no quota 3,182 - -	10 377 559 169 103	4 100 643 0 -
	1964	1	1	GIII	-	Lake Whitefish Northern Pike Walleye Sucker Other	-	11.4	4,545 no quota 3,182 - -	34 254 618 454 6	15 56 341 0 1
	1963	1	1	GIII	-	Lake Whitefish Northern Pike Walleye Sucker	-	11.4	4,545 no quota 3,182 -	295 737 2,249 1,134	104 195 1,488 0

and Licence #	Year	Of Fishermen	Gear Licence Amount	Type	Dates Valid	Species or Fish	Fishing Effort (m)	Mean Size (cm)	Quota (kg)	Harvest (kg)	Value of Harvest (\$)
1962		1	1	Gill	-	Lake Whitefish	-	11.4	4,545	373	132
						Northern Pike	-	-	no quota	137	30
						Walleye	-	-	3,182	231	133
						Sucker	-	-	-	363	0
						Burbot	-	-	-	91	0
1961		1	1	Gill	-	Other	-	-	-	124	27
						Northern Pike	-	11.4	no quota	421	93
						Walleye	-	-	2,727	701	371
						Sucker	-	-	-	204	0
							-	-	-	-	-
1960		1	1	Gill	-	Lake Whitefish	-	11.4	no quota	1,322	599
						Northern Pike	-	-	no quota	2,396	711
						Walleye	-	-	2,727	2,369	1,699
						Sucker	-	-	-	752	57
						Other	-	-	-	541	125
Bowden Lake 1985		1	1	Gill	Jan-Mar June-Dec	Lake Whitefish	17,190	11.4	2,050	907	800
						Northern Pike	-	-	45	4	-
						Walleye	-	-	45	28	-
						Lake Herring	-	-	-	261	86
						Sucker	-	-	-	215	-
1984		1	1	Gill	Jan-Mar July-Dec	Burbot	-	-	-	179	-
						Lake Whitefish	30,083	11.4	3,600	1,413	1,178
						Northern Pike	-	-	45	79	-
						Walleye	-	-	45	126	-
						Lake Herring	-	-	-	1,420	470
1983		1	1	Gill	Jan-Mar July-Dec	Sucker	-	-	-	884	-
						Burbot	-	-	-	723	-
						Lake Whitefish	7,026	11.4	3,600	204	135
						Northern Pike	-	-	45	-	-
						Walleye	-	-	45	5	-
		1	1	Gill		Lake Herring	-	-	-	45	15
						Sucker	-	-	-	313	55
						Burbot	-	-	-	159	-
							-	-	-	-	-
							-	-	-	-	-

Lake Name and Licence #	Year	Number of Fishermen	Gear Licenced Amount	Type	Dates Valid	Species of Fish	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Reported Harvest (kg)	Value of Harvest (\$)
1982	1982	1	1	Gill	Jan-Mar Oct-Dec	Lake Whitefish	12,162	11.4	3,600	733	630
						Northern Pike			45	45	41
						Burbot			-	832	0
						Other			-	2,002	0
1981	1981	1	1	Gill	OCT-NOV	Lake Whitefish	99,000	11.4	3,636	930	1,107
						Northern Pike			45	27	27
						Walleye			45	25	63
						Lake Herring			-	136	43
						Sucker			-	313	93
						Burbot			-	433	33
						Other			-	433	0
1980	1980	1	1	Gill	Oct-Nov	Lake Whitefish	9,238	11.4	3,636	1,179	1,170
						Northern Pike			45	29	0
						Walleye			45	29	0
						Lake Herring			-	91	40
						Sucker			-	272	90
						Burbot			-	537	0
						Other			-	587	0
1979	1979	1	1	Gill	Oct-Nov	Lake Whitefish	10,976	11.4	3,636	1,334	1,470
						Northern Pike			45	20	0
						Walleye			45	19	0
						Lake Herring			-	102	0
						Sucker			-	340	0
						Burbot			-	413	0
1978	1978	1	1	Gill	Oct-Nov	Lake Whitefish	457	11.4	3,182	5	5
						Northern Pike			45	-	-
						Walleye			45	-	-
						Lake Herring			-	11	0
						Sucker			-	113	20
						Burbot			-	16	0
1977	1977	1	1	Gill	Oct-Nov	Lake Whitefish	12,439	11.4	3,182	1,066	1,175
						Northern Pike			45	45	0
						Walleye			45	56	0
						Lake Herring			-	138	0
						Sucker			-	437	77
						Burbot			-	637	0

Licence #	Year	of Fishermen	Gear Licenced Amount	Type	Dates Valid	Species of Fish	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Reported Harvest (kg)	Harvest (\$)
	1976	1	1	Gill	Oct-Nov	Lake Whitefish Northern Pike Walleye	-	11.4	3,182 45 45	- - -	- - -
	1975	1	1	Gill	July-Aug 15 Oct-Nov	Lake Whitefish Northern Pike Walleye Burbot Other	12,622	11.4	3,182	1,021	788
	1974	1	1	Gill	July-Aug 15	Lake Whitefish Walleye Burbot Other	-	11.4	3,182	1,111 39 896 975	1,470 0 0 0
	1973	1	1	Gill	July-Aug 15	Lake Whitefish Walleye Burbot Other	-	11.4	3,182	64 27 181 884	56 48 0 91
	1972	1	1	Gill	July-Aug 15	Lake Whitefish	-	11.4	3,182	-	-
	1971	1	1	Gill	-	Lake Whitefish Northern Pike Walleye Sucker	-	11.4	3,182 909 2,727 -	732 908 1,313 1,834	355 170 1,130 0
	1970	1	1	Gill	-	Lake Whitefish Northern Pike Walleye Lake Herring Sucker Burbot	-	11.4	3,182 909 2,727 - - -	517 374 549 372 1,655 800	239 83 448 - - -

Licence #	Year	of Fishermen	Gear Licenced Amount	Type	Dates Valid	Species and Fish	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Reported Harvest (kg)	Value of Harvest (\$)
1969	1969	1	1	Gill	-	Lake Whitefish	-	11.4	3,182	-	-
						Northern Pike	-	-	909	-	-
						Walleye	-	-	2,727	-	-
1968	1968	1	1	Gill	-	Lake Whitefish	-	11.4	3,182	-	-
						Northern Pike	-	-	909	476	147
						Walleye	-	-	2,727	394	481
1967	1967	1	1	Gill	-	Sucker	-	-	-	368	73
						Lake Whitefish	-	11.4	3,182	1,092	558
						Northern Pike	-	-	909	462	135
1966	1966	1	1	Gill	-	Walleye	-	-	2,727	1,715	1,125
						Other	-	-	-	39	13
						Lake Whitefish	-	11.4	3,182	677	131
1965	1965	1	1	Gill	-	Northern Pike	-	-	909	1,027	313
						Walleye	-	-	2,727	1,654	1,288
						Sucker	-	-	-	91	0
1964	1964	1	1	Gill	-	Lake Whitefish	-	11.4	3,182	902	270
						Northern Pike	-	-	909	1,075	159
						Walleye	-	-	2,727	2,999	1,713
1963	1963	1	1	Gill	-	Sucker	-	-	-	91	0
						Lake Whitefish	-	11.4	3,182	319	101
						Northern Pike	-	-	909	122	28
1962	1962	1	1	Gill	-	Walleye	-	-	2,727	2,427	1,391
						Lake Whitefish	-	11.4	3,182	-	-
						Northern Pike	-	-	909	-	-
1962	1962	1	1	Gill	-	Walleye	-	-	2,727	-	-
						Lake Whitefish	-	11.4	3,182	81	29
						Northern Pike	-	-	909	430	114
1962	1962	1	1	Gill	-	Walleye	-	-	2,727	591	547

Licence #	Year	Fishermen	Amount	License Type	Dates Valid	Effort (m)	Size (cm)	Weight (kg)	Weight (kg)
	1961	1	1	Gill	-	-	11.4	3,636	-
	1960	Information not available							
Sparkling Lake	1963-1981	No licence issued							
	1962	1	1	Gill	-	-	11.4	227 1,818 2,273	-
	1961	1	1	Gill	-	-	11.4	227 2,727	-
	1960	Information not available							
Sturgeon	1985	1	1	Gill 1 (Trap)	-	-	11.4	454 16,330 454 454	469 7,814 23 160 348 556 341
	1984	1	1	Gill 1 (Trap)	-	-	11.4	454 16,330 454 454	752 9,531 93 1,168 151 -
	1983	1	1	Gill 1 (Trap)	-	-	11.4	454 16,330 454 454	109 7,415 54 421 202 903

Lake Name and Licence #	Year	Number of Fishermen	Gear Licenced Amount	Type	Dates Valid	Species of Fish	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Reported Harvest (kg)	Value of Harvest (\$)
	1982	1	1	Gill 1 (Trap)	-	Lake Trout	55,961	11.4	454	343	-
						Lake Whitefish			16,330	1,690	1,304
						Northern Pike			454	170	138
						Walleye			454	100	209
						Sucker			-	356	94
						Burbot			-	118	-
	1981	1	1	Gill 1 (Trap)	-	Lake Trout	319,000	11.4	455	134	295
						Lake Whitefish			16,364	11,056	13,162
						Northern Pike			455	35	40
						Walleye			455	217	588
						Sucker			-	429	132
						Burbot			-	2,166	191
						Other			-	2,370	0
	1980	1	1	Gill 1 (8' Trap)	-	Lake Trout	21,311	11.4	455	100	0
						Lake Whitefish			16,364	3,452	2,497
						Northern Pike			455	236	234
						Walleye			455	32	100
						Sucker			-	342	49
						Burbot			-	535	0
						Other			-	460	0
	1979	1	1	Gill 1 (8' Trap)	-	Lake Trout	4,939	11.4	909	- 32	0
						Lake Whitefish			16,364	1,050	2,083
						Northern Pike			no quota	14	0
						Walleye			455	104	311
						Sucker			-	127	22
						Burbot			-	7	0
	1978	1	1	Gill 1 (8' Trap)	-	Lake Trout	8,232	11.4	909	34	38
						Lake Whitefish			no quota	2,638	5,234
						Walleye			455	-	-
						Sucker			-	209	37
						Burbot			-	186	0

Lake Name and Licence #	Year	Of Fishermen	Gear Licenced Amount	Type	Dates Valid	Species of Fish	Fishing Effort (m)	Size (cm)	Quota (kg)	Harvest (kg)	Harvest (\$)
1977	1977	1	1	Gill 1(8' Trap)	-	Lake Trout	54,604	11.4	909	345	420
						Lake Whitefish			no quota	3,032	6,150
						Walleye			455	16	35
						Sucker			-	209	37
						Burbot			-	1,304	0
						Other			-	3	5
1976	1976	1	1	Gill 1(8' Trap)	-	Lake Trout	76,079	11.4	909	413	230
						Lake Whitefish			no quota	3,997	7,714
						Northern Pike			1,818	294	97
						Walleye			2,273	929	1,226
						Sucker			-	1,193	195
						Burbot			-	1,504	0
1975	1975	1	1	Gill 1(8' Trap)	-	Lake Trout	113,043	11.4	454	112	77
						Lake Whitefish			no quota	15,721	14,841
						Northern Pike			1,818	512	235
						Walleye			4,545	271	367
						Sucker			-	1,411	213
						Burbot			-	2,184	0
1974	1974	1	1	Gill	-	Lake Trout	6,311	11.4	454	-	-
						Lake Whitefish			no quota	2,523	1,962
						Northern Pike			1,818	1,154	503
						Walleye			4,545	592	719
						Sucker			-	1,134	186
						Burbot			-	297	0
1973	1973	1	1	Gill	-	Other			-	34	11
						Lake Trout	5,305	11.4	454	-	-
						Lake Whitefish			no quota	396	292
						Northern Pike			-	41	14
						Walleye			-	222	270
						Sucker			-	274	33
						Burbot			-	50	0
						Other			-	175	0

Lake Name and Licence #	Year	Number of Fishermen	Gear Licenced Amount	Type	Dates Valid	Species of Fish	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Reported Harvest (kg)	Value of Harvest (\$)
	1972	1	1	Gill	-	Lake Trout Lake Whitefish Walleye Sucker Burbot	-	11.4	454 no quota	- 1,003 297 218 156	- 619 336 4 0
	1971	1	1	Gill	-	Lake Trout Lake Whitefish Northern Pike Walleye Sucker Burbot	-	11.4	454 no quota 1,818 4,545 - -	11 10 355 98 508 113	9 6 94 107 23 0
	1970	1	1	Gill	-	Lake Trout Lake Whitefish Northern Pike Walleye Lake Herring Sucker Burbot Other	-	11.4	454 no quota 1,818 4,545 - - - -	71 446 375 626 10 476 556 1,225	42 301 105 562 1 27 - -
	1969	1	1	Gill	-	Lake Trout Lake Whitefish Northern Pike Walleye Lake Herring Sucker Burbot Other	-	11.4	454 no quota 1,813 6,364 - - - -	- 706 4,564 1,766 1,220 47 8,199 2,449 2,336	731 3,387 491 1,170 10 - - -

Lake Name and Licence #	Year	Number of Fishermen	Gear Licenced Amount	Type	Dates Valid	Species of Fish	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Reported Harvest (kg)	Value of Harvest (\$)
1968	1968	1	1	Gill	-	Lake Trout	-	11.4	2,273	5,080	4,835
						Lake Whitefish			9,090	9,929	6,892
						Northern Pike			-	2,539	678
						Walleye			7,273	2,557	1,886
						Lake Herring			-	177	39
						Sucker			-	11,476	-
1967	1967	1	1	Gill	-	Burbot			-	6,017	-
						Other			-	2,438	-
						Lake Trout	-	11.4	2,273	4,414	3,959
						Lake Whitefish			9,090	6,995	3,674
						Northern Pike			-	2,654	668
						Walleye			7,273	4,701	2,963
1966	1966	1	1	Gill	-	Lake Herring			-	319	53
						Sucker			-	13,544	-
						Burbot			-	6,173	-
						Lake Trout	-	11.4	2,273	4,826	4,664
						Lake Whitefish			9,090	4,644	2,649
						Northern Pike			-	2,423	657
1965	1965	1	1	Gill	-	Walleye			7,273	5,768	5,372
						Lake Herring			-	400	166
						Sucker			-	12,122	-
						Burbot			-	-4,453	205
						Other			-	6,067	-
						Lake Trout	-	11.4	2,273	4,225	4,075
						Lake Whitefish			9,090	8,864	4,264
						Northern Pike			-	2,938	687
						Walleye			7,273	6,517	5,290
						Sucker			-	6,214	0
						Burbot			-	2,563	0
						Other			-	14,538	0

Lake Name and Licence #	Year	Number of Fishermen	Gear Licenced		Dates Valid	Species of Fish	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Reported Harvest		Value of Harvest (\$)
			Amount	Type						(kg)		
1964		1	1	Gill	-	Lake Trout	-	11.4	2,273	5,151		3,249
						Lake Whitefish			9,090	11,265		4,502
						Northern Pike			-	3,591		768
						Walleye			7,273	4,621		3,127
						Sucker			-	14,890		0
						Burbot			-	4,563		20
1963		1	1	Gill	-	Other			-	4,350		0
						Lake Trout	-	11.4	2,273	3,881		3,013
						Lake Whitefish			9,090	10,214		4,288
						Northern Pike			-	3,326		693
						Walleye			7,273	6,648		4,139
						Sucker			-	11,424		0
1962		1	1	Gill	-	Burbot			-	4,711		0
						Other			-	2,177		0
						Lake Trout	-	11.4	2,273	3,562		2,897
						Lake Whitefish			9,090	13,191		4,701
						Northern Pike			-	4,127		927
						Walleye			7,273	9,206		4,661
1961		1	1	Gill	-	Sucker			-	16,942		0
						Burbot			-	7,800		0
						Other			-	48		5
						Lake Trout	-	11.4	2,273	3,910		3,777
						Lake Whitefish			9,090	13,250		4,539
						Northern Pike			-	4,792		994
						Walleye			7,273	10,875		5,173
						Sucker			-	15,604		0
						Burbot			-	6,951		0
						Other			-	143		11

Licence #	Year	No of Fishermen	Gear Licence Amount	Type	Dates Valid	Species Fish	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Harvest (kg)	Harvest (\$)
	1960	1	1	Gill	-	Lake Trout Lake Whitefish Northern Pike Walleye Sucker Burbot	-	11.4	2,273 9,090 - 7,273 - -	5,191 11,604 3,314 9,738 13,109 9,133	4,179 4,262 731 5,916 0 0

Wapikaitmaski Lake											
	1982 - 1985	No licence issued									
	1981	1	1	Gill	July 15-Aug 15	Lake Trout Lake Whitefish Northern Pike Walleye	-	11.4	0 4,545 182 91	- - - -	- - - -
	1980	1	1	Gill	July 15-Aug 15	Lake Trout Lake Whitefish Northern Pike Walleye	-	11.4	0 4,545 182 91	- - - -	- - - -

	1977-79	No licence issued									
	1976	1	1	Gill	Oct-Nov	Lake Trout Lake Whitefish Northern Pike Walleye	-	11.4	0 no quota 5% of catch 5% of catch	- - - -	- - - -
	1975	1	1	Gill	Oct-Nov	Lake Trout Lake Whitefish Northern Pike Walleye	-	11.4	0 no quota 5% of catch 5% of catch	- - - -	- - - -

Lake Name and Licence #	Year	Number of Fishermen	Gear Licence Amount	Type	Dates Valid	Species Fish	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Reported Harvest (kg)	Value of Harvest (\$)
1974	1974	1	1	Gill	-	Lake Whitefish	-	11.4	2,727	-	-
						Northern Pike	-	-	909	-	-
						Walleye	-	-	2,273	-	-
1973	1973	1	1	Gill	-	Lake Trout	-	11.4	91	-	-
						Lake Whitefish	-	-	2,727	-	-
						Northern Pike	-	-	909	-	-
1972	1972	1	1	Gill	-	Walleye	-	-	2,273	-	-
						Lake Trout	-	11.4	91	-	-
						Lake Whitefish	-	-	2,727	-	-
1971	1971	1	1	Gill	-	Northern Pike	-	-	909	-	-
						Walleye	-	-	2,273	-	-
						Lake Trout	-	11.4	91	-	-
1970	1970	1	1	Gill	-	Lake Whitefish	-	-	2,727	-	-
						Northern Pike	-	-	909	1,109	333
						Walleye	-	-	2,273	921	327
						Lake Herring	-	-	-	156	59
						Sucker	-	-	-	522	-
						Burbot	-	-	-	517	-
1969	1969	1	1	Gill	-	Lake Trout	-	11.4	91	-	-
						Lake Whitefish	-	-	2,727	125	58
						Northern Pike	-	-	909	1,560	433
						Walleye	-	-	2,273	1,613	1,638
						Lake Herring	-	-	-	347	115
						Sucker	-	-	-	653	-
						Burbot	-	-	-	445	-
						Other	-	-	-	172	6.0

Lake Name and Licence #	Year	Number of Fishermen	Gear Licence Amount	Gear Licence Type	Dates Valid	Species of Fish	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Reported Harvest (kg)	Value of Harvest (\$)
1968	1968	1	1	Gill	-	Lake Trout	-	11.4	91	-	-
						Lake Whitefish	-	-	2,727	313	113
						Northern Pike	-	-	909	1,250	341
						Walleye	-	-	2,273	1,495	1,293
						Lake Herring	-	-	-	104	17
						Sucker	-	-	-	603	-
1967	1967	1	1	Gill	-	Burbot	-	-	-	315	-
						Lake Trout	-	11.4	91	-	-
						Lake Whitefish	-	-	2,727	329	131
						Northern Pike	-	-	909	1,200	253
						Walleye	-	-	2,273	1,286	1,463
						Sucker	-	-	-	440	-
1966	1966	1	1	Gill	-	Burbot	-	-	-	463	-
						Lake Trout	-	11.4	91	-	-
						Lake Whitefish	-	-	2,727	587	263
						Northern Pike	-	-	909	1,388	444
						Walleye	-	-	2,273	1,354	1,523
						Lake Herring	-	-	-	82	18
1965	1965	1	1	Gill	-	Sucker	-	-	-	562	-
						Burbot	-	-	-	408	-
						Other	-	-	-	48	-
						Lake Trout	-	11.4	91	-	-
						Lake Whitefish	-	-	2,727	268	120
						Northern Pike	-	-	909	1,364	124
						Walleye	-	-	2,273	2,191	1,154
						Sucker	-	-	-	680	0
						Burbot	-	-	-	431	0
						Other	-	-	-	318	65

Lake Name and Licence #	Year	Number of Fishermen	Gear Licenced Amount	Type	Dates Valid	Species of Fish	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Reported Harvest (kg)	Value of Harvest (\$)
Wintering Lake	1961	1	1	Gill	-	Lake Trout Lake Whitefish Northern Pike Walleye Sucker Burbot	-	11.4	91 no quota - 2,727 - -	- 91 1,018 1,771 726 347	- 40 284 1,365 25 0
	1960	1	1	Gill	-	Lake Trout Lake Whitefish Northern Pike Walleye Sucker Burbot	-	11.4	91 no quota - 2,727 - -	- 44 653 1,717 311 252	- 23 200 1,430 11 0
	1983 - 1985	No Licence issued									
	1982	1	1	Gill	July 15-Aug 15	Lake Whitefish Northern Pike Walleye	0	N/A	909 227 114	- - -	- - -
	1981	1	1	Gill	July 15-Aug 15	Lake Whitefish Northern Pike Walleye	-	11.4	909 227 114	- - -	- - -
	1980	1	1	Gill	July 15-Aug 15	Lake Whitefish Northern Pike Walleye Sucker Other	32,927	11.4	909 227 114 - -	55 38 22 102 32	61 42 48 0 35

Lake Name and Licence #	Year	Number of Fishermen	Gear Licenced Amount	Type	Dates Valid	Species of Fish	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Reported Harvest (kg)	Value of Harvest (\$)
1977		1	1	Gill	July/Nov	Lake Whitefish	9,329	11.4	3,636	544	659
						Northern Pike				200	221
						Walleye				152	307
						Sucker				1,262	0
						Other				240	159
1976		1	1	Gill	July/Nov	Lake Whitefish	9,672	11.4	3,636	503	452
						Northern Pike				425	467
						Walleye				200	659
						Sucker				1,014	0
						Other				332	206
1975		1	1	Gill	-	Lake Whitefish	53,232	11.4	2,273	489	372
						Northern Pike				1,062	971
						Walleye				652	1,796
						Sucker				1,590	0
						Other				386	255
1974		1	1	Gill	-	Lake Whitefish	13,445	11.4	2,273	219	241
						Northern Pike				689	753
						Walleye				225	619
						Sucker				807	0
						Other				150	52
1973		1	1	Gill	-	Lake Whitefish	119,177	11.4	2,273	472	521
						Northern Pike				741	817
						Walleye				933	2,145
						Sucker				1,041	0
						Other				485	321
1972		1	1	Gill	-	Lake Whitefish	-	11.4	2,273	96	84
						Northern Pike				654	603
						Walleye				538	1,620
						Sucker				1,848	0
						Other				223	102

Lake Name and Licence #	Year	Number of Fishermen	Gear Licenced Amount	Gear Type	Dates Valid	Species of Fish	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Reported Harvest (kg)	Value of Harvest (\$)
	1969	1	1	Gill	-	Lake Whitefish Northern Pike Walleye Sucker	-	11.4	2,273 - 1,813 -	692 624 254 907	153 249 280 -
	1968	1	1	Gill	-	Lake Whitefish Northern Pike Walleye	-	11.4	2,273 - 1,818	612 1,862 894	437 581 861
	1967	1	1	Gill	-	Lake Whitefish Northern Pike Walleye	-	11.4	2,273 - 1,818	- 1,342 651	- 353 425
	1966	1	1	Gill	-	Lake Whitefish Northern Pike Walleye	-	11.4	2,273 - 1,818	- 796 324	- 211 286
	1965	1	1	Gill	-	Lake Whitefish Northern Pike Walleye Other	-	11.4	2,273 - 1,818 -	- 701 172 16	- 232 171 11
	1964	1	1	Gill	-	Lake Whitefish Walleye	-	11.4	2,273 1,818	- -	- -
	1963	1	1	Gill	-	Lake Whitefish Northern Pike Walleye	-	11.4	2,273 - 1,818	- 1,228 1,266	- 397 425
	1962	1	1	Gill	-	Lake Whitefish Northern Pike Walleye Sucker	-	11.4	2,273 - 1,818 -	50 775 936 288	17 153 508 9

Lake Name and Licence #	Year	Number of Fishermen	Gear Licenced		Dates Valid		Species Fish	Fishing Effort (m)	Mesh Size (cm)	Quota (kg)	Harvest (kg)	Harvest (t)
			Amount	Type	Start	End						
	1961	1	1	Gill	-	-	Walleye	-	11.4	2,727	-	-
	1960	1	1	Gill	-	-	Lake Whitefish	-	11.4	-	113	38
							Northern Pike			-	2,598	591
							Walleye			2,727	2,809	1,793
							Sucker			-	792	55
							Other			-	226	20

TABLE 15: ANNUAL SUMMARY OF TOTAL MMERCIAL FISH LICENCING, FISHING EFFORT, REPORTED FISH HARVEST AND VALUE, IGNACE DISTRICT 1960 to 1985

Year	No. of Licences			Amount of licences			Fishing Effort			Trap		Total Reported		Total Value of	
	Impounding									Net		Harvest (kg)		All Species	
	Gill	Gear		Yards	Meters	No. of Traps	Yards	Fished	Meters	Days		All Species		Harvested	
1985	7	-		16,158	14,775	-	57,199	52,303				16,477		16,770	
1984	9	-		20,204	18,475	-	96,598	88,329				32,247		26,158	
1983	9	-		20,204	18,475	-	63,799	58,338				23,335		16,388	
1982	11	-		22,228	20,325	-	137,430	125,666				21,961		17,257	
1981	11	0		21,686	19,830		712,051	651,099				33,052		33,268	
1980	11	0		24,500	22,403		200,922	183,723				27,260		25,290	
1979	10	0		20,000	18,288		227,150	207,706				21,265		26,145	
1978	9	1		18,000	16,459	1	368,950	337,368		0		18,696		14,865	
1977	10	0		18,000	16,459		171,100	15,636				27,051		21,639	
1976	10	1		18,000	16,459	1	145,555	133,096		36		24,837		19,781	
1975	10	1		20,000	18,288	1	234,300	214,244		16		50,853		34,401	
1974	10	0		22,000	20,117		104,200	95,281				17,135		5,517	
1973	9	0		20,000	18,288		294,200	269,017				9,776		3,182	
1972	-	-		-	-		-	-				8,109		5,823	
1971	-	-		-	-		-	-				15,841		6,819	
1970	-	-		-	-		-	-				100,639		21,849	
1969	-	-		-	-		-	-				121,641		56,199	
1968	-	-		-	-		-	-				106,076		48,191	
1967	-	-		-	-		-	-				94,531		43,600	
1966	-	-		-	-		-	-				116,603		52,726	
1965	-	-		-	-		-	-				118,794		49,982	
1964	-	-		-	-		-	-				118,373		42,481	
1963	-	-		-	-		-	-				74,670		26,899	
1962	-	-		-	-		-	-				108,244		33,575	
1961	-	-		-	-		-	-				72,833		26,716	
1960	-	-		-	-		-	-				126,927		42,902	

1 - Total reported harvest includes all fish species harvested (including discards & unmarketable i.e. ling, lake trout)

- Licence information prior to 1973 is incomplete due to reorganization thus estimates may be minimal

- Market values are for fish sold

- Value figures for 1973-74 are extrapolated using average return dollar value since returns are unavailable (estimating 100% sale)

TABLE 16: ANNUAL SUMMARY OF TOTAL COMMERCIAL FISH HARVEST
AND VALUE FOR ALL SPECIES, IGNACE DISTRICT 1960 - 1985,
BY WATERBODY FISHED

<u>Waterbody</u>	<u>Year</u>	<u>Total Reported Harvest For All Species (kg)</u>	<u>Total Value of All Species Harvested</u>
Abamategwia	1982-1985	Nil Fishing	
	1981	-	-
	1980	-	-
	1979	-	-
	1978	463	702
	1977	1,638	1,400
	1976	-	-
	1975	-	-
	1974	-	-
	1973	-	-
	1972	-	-
	1971	-	-
	1970	11,889	1,264
	1969	-	-
	1968	1,361	526
	1967	-	-
	1966	-	-
	1965	1,471	652
	1964	3,381	1,785
	1963	-	-
	1960	-	-
Barrel	1985	-	-
	1984	-	-
	1983	1,909	1,293
	1982	2,652	1,815
	1981	3,077	3,293
	1980	4,423	4,515
	1979	3,452	3,771
	1978	4,688	4,795
	1977	-	-
	1970	-	-
	1969	722	436

<u>Waterbody</u>	<u>Year</u>	<u>Total Reported Harvest For All Species (kg)</u>	<u>Total Value of All Species Harvested</u>
	1968	-	-
	1967	2,832	1,114
	1966	4,761	1,808
	1965	-	-
	1960	-	-
Basket	1985	424	304
	1984	839	750
	1983	1,390	706
	1982	78	79
	1981	-	-
	1980	-	-
	1979	4,905	4,149
	1978	-	-
	1977	-	-
	1976	-	-
	1975	4,131	2,977
	1974	2,247	2,285
	1973	-	-
	1971	-	-
	1970	9,895	2,093
	1969	4,001	1,922
	1968	6,105	2,470
	1967	-	-
	1966	4,608	2,459
	1965	5,859	4,883
	1964	5,527	3,167
	1963	-	-
	1962	11,442	4,410
	1961	-	-
	1960	14,336	6,555
Bell	1985	407	717
	1984	-	-
	1983	1,017	1,672

<u>Waterbody</u>	<u>Year</u>	<u>Total Reported Harvest For All Species (kg)</u>	<u>Total Value of All Species Harvested</u>
	1982	634	855
	1981	939	1,169
	1980-1976	Nil Fishing	
	1975	1,760	1,255
	1974	Nil Fishing	
	1973	1,546	748
	1972	220	90
	1971	587	177
	1970	3,801	1,995
	1969	,369	1,309
	1968	833	449
	1967	2,582	1,034
	1966	-	-
	1965	4,148	1,103
	1964	2,958	902
	1963	5,916	1,981
	1962	1,758	576
	1961	-	-
	1960	3,269	1,319
Indian	1985	2,125	2,265
	1984	6,079	5,306
	1983	3,814	2,791
	1982	5,417	5,122
	1981	5,526	5,866
	1980	4,981	5,600
	1979	5,161	5,486
	1978	-	-
	1977	4,525	8,179
	1976	7,991	6,385
	1975	9,565	8,456
	1974	Nil Fishing	
	1973	Nil Fishing	
	1972	Nil Fishing	
	1971	Nil Fishing	

<u>Waterbody</u>	<u>Year</u>	<u>Total Reported Harvest For All Species (kg)</u>	<u>Total Value of All Species Harvested</u>
	1970	26,915	3,575
	1969	14,795	4,858
	1968	2,135	536
	1967	6,259	2,599
	1966	12,534	5,902
	1965	8,126	4,512
	1964	9,057	3,228
	1963-1960	Nil Fishing	
Kukukus	1985-1982	Nil fishing	
	1981-1977	Nil Fishing	
	1976	920	505
	1975-1973	Nil Fishing	
	1972	2,853	1,865
	1971	2,146	1,070
	1970	3,926	1,078
	1969	11,359	3,904
	1968	5,351	2,644
	1967	9,997	4,555
	1966	3,805	1,439
	1965	6,836	3,065
	1964	8,152	2,846
	1963	4,274	2,719
	1962	3,225	1,150
	1961	4,045	1,886
	1960	Nil Fishing	
Lake-of-Bays	1985	73	20
	1984	639	554
	1983-1982	Nil Fishing	
	1981	527	588
	1980	1,233	1,540
	1979	1,257	1,801
	1978	Nil Fishing	
	1977	Nil Fishing	

<u>Waterbody</u>	<u>Year</u>	<u>Total Reported Harvest For All Species (kg)</u>	<u>Total Value of All Species Harvested</u>
	1970	1,655	1,495
	1969	5,879	3,474
	1968	4,813	2,082
	1967	6,568	3,044
	1966	1,649	742
	1965	4,146	2,104
	1964	5,123	2,276
	1963	4,377	2,239
	1962	2,524	864
	1961	6,858	2,274
	1960	6,245	2,617
Mameigwess	1985	Nil Fishing	
	1984	3,574	4,049
	1983	4,434	3,277
	1982	8,408	6,661
	1981	5,449	6,127
	1980	8,034	7,135
	1979	Nil Fishing	
	1978	5,336	6,358
	1977	6,506	
	1976-1971	Nil Fishing	
	1970	14,795	4,326
	1969	10,059	6,851
	1968	9,319	4,446
	1967	9,586	4,866
	1966	6,887	4,526
	1965	7,446	3,749
	1964	9,003	4,802
	1963	Nil Fishing	
	1962	3,344	1,739
	1961	3,640	1,929
	1960	11,124	4,273
Mattawa	1985-1982	Nil Fishing	

<u>Waterbody</u>	<u>Year</u>	<u>Total Reported Harvest For All Species (kg)</u>	<u>Total Value of All Species Harvested</u>
	1981-1971	Nil Fishing	
	1970	2,537	1,367
	1969	3,989	2,285
	1968	1,563	599
	1967	3,004	1,004
	1966	1,091	293
	1965	1,270	732
	1964	2,276	1,124
	1963	Nil Fishing	
	1962	3,154	1,158
	1961	1,844	729
	1960	7,321	2,956
Paguchi	1985	2,484	2,892
	1984	4,035	2,040
	1983	941	200
	1982	213	160
	1981	832	714
	1980	Nil Fishing	
	1979	3,387	4,531
	1978	3,844	3,742
	1977-1970	Nil Fishing	
	1969	3,905	1,072
	1968	4,259	1,225
	1967	3,638	1,795
	1966	3,930	1,893
	1965	1,834	892
	1964	1,850	504
	1963	Nil Fishing	
	1962	5,071	1,252
	1961	3,953	1,453
	1960	5,436	1,311
Penassi	1985-1982	Nil Fishing	
	1981-1972	Nil Fishing	

<u>Waterbody</u>	<u>Year</u>	<u>Total Reported Harvest For All Species (kg)</u>	<u>Total Value of All Species Harvested</u>
	1971	1,127	731
	1970	650	427
	1969	1,599	384
	1968	1,90	1,352
	1967-1966	Nil Fishing	
	1965	4,670	2,604
	1964	4,621	1,848
	1963	2,577	1,662
	1962	3,270	1,072
	1961-1960	Nil Fishing	
Press	1985-1982	Nil Fishing	
	1981-1971	Nil Fishing	
	1970	2,872	1,534
	1969	2,247	1,708
	1968	1,588	764
	1967	2,361	897
	1966	Nil Fishing	
	1965	3,797	1,934
	1964	2,200	563
	1963	Nil Fishing	
	1962	3,411	1,695
	1961	1,901	446
	1960	6,512	2,559
Seseganaga	1985-1982	Nil Fishing	
	1981-1972	Nil Fishing	
	1971	2,109	934
	1970	3,990	2,348
	1969	5,909	4,584
	1968	5,533	4,613
	1967	4,340	2,401
	1966	4,798	2,820
	1965	7,700	3,885
	1964	6,277	2,901

<u>Waterbody</u>	<u>Year</u>	<u>Total Reported Harvest For All Species (kg)</u>	<u>Total Value of All Species Harvested</u>
	1963	5,251	2,313
	1962	8,114	3,222
	1961	3,848	1,327
	1960	3,732	1,284
Shikag	1985-1982	Nil Fishing	
	1981-1977	Nil Fishing	
	1976	1,274	412
	1975	3,525	1,533
	1974	4,132	2,932
	1973	2,097	1,424
	1972-1970	Nil Fishing	
	1969	3,081	1,516
	1968	5,931	2,589
	1967	Nil Fishing	
	1966	5,398	1,845
	1965	1,218	747
	1964	1,367	413
	1963	4,416	1,787
	1962	1,320	322
	1961	1,327	464
	1960	7,381	3,191
Sowden	1985	1,594	886
	1984	4,645	1,648
	1983	726	205
	1982	2,091	770
	1981	2,303	1,390
	1980	2,775	1,300
	1979	2,229	1,470
	1978	145	25
	1977	2,260	1,252
	1976	Nil Fishing	
	1975	3,905	788
	1974	3,022	1,470

<u>Waterbody</u>	<u>Year</u>	<u>Total Reported Harvest For All Species (kg)</u>	<u>Total Value of All Species Harvested</u>
	1973	1,157	195
	1972	Nil Fishing	
	1971	4,788	1,655
	1970	4,269	770
	1969	Nil Fishing	
	1968	1,239	701
	1967	3,308	1,831
	1966	3,359	1,732
	1965	5,068	2,142
	1964	2,869	1,520
	1963	Nil Fishing	
	1962	1,102	690
	1961-1060	Nil Fishing	
Sturgeon	1985	9,370	9,686
	1984	12,436	11,695
	1983	9,104	6,244
	1982	2,468	1,795
	1981	16,410	14,408
	1980	5,159	2,980
	1979	1,333	2,416
	1978	3,067	5,309
	1988	4,917	6,647
	1976	14,337	9,512
	1975	20,216	15,739
	1974	5,741	3,381
	1973	1,158	609
	1972	1,675	959
	1971	1,096	239
	1970	3,786	1,038
	1969	21,292	5,789
	1968	40,222	14,330
	1967	38,911	113,117
	1966	40,712	13,713
	1965	55,869	14,317

<u>Waterbody</u>	<u>Year</u>	<u>Total Reported Harvest For All Species (kg)</u>	<u>Total Value of All Species Harvested</u>
	1964	48,446	12,366
	1963	42,391	12,133
	1962	54,887	13,191
	1961	55,538	14,494
	1960	52,102	15,138
Wapikaimaski	1982-1985	Nil Fishing	
	1981-1971	Nil Fishing	
	1970	3,387	1,312
	1969	4,895	2,404
	1968	4,081	1,769
	1967	3,718	1,847
	1966	4,430	2,253
	1965	5,302	2,263
	1964	5,313	2,236
	1963	3,004	1,246
	1962	3,600	1,556
	1961	3,954	1,714
	1960	2,978	1,664
Wintering	1985-1982	Nil Fishing	
	1981	Nil Fishing	
	1980	249	186
	1979	1,572	1,139
	1978	4,011	2,956
	1977	2,399	1,346
	1976	2,474	1,784
	1975	4,180	3,394
	1974	2,159	1,671
	1973	3,673	3,804
	1972	3,359	2,409
	1971	3,995	2,013
	1970	2,592	1,642
	1969	2,478	681
	1968	3,370	1,879

<u>Waterbody</u>	<u>Year</u>	<u>Total Reported Harvest For All Species (kg)</u>	<u>Total Value of All Species Harvested</u>
	1967	1,993	778
	1966	1,121	497
	1965	889	414
	1964	Nil Fishing	
	1963	2,494	822
	1962	2,050	578
	1961	Nil Fishing	
	1960	6,539	2,502

TABLE 17: ANNUAL SUMMARY OF REPORTED COMMERCIAL FISH HARVEST, IGNACE DISTRICT, 1960 to 1985, BY SPECIES

Reported Harvest by Species (kg)

Year	Northern			Lake		Lake			Other (includes Discards)	Total kg
	Chub	Pike	Trout	Eelrbot	Herring	Sucker	Whitefish	Walleye		
1985	261	160	585	1,018		1,027	13,055	354	17	16,477
1984	1,420	851	540	4,132		3,034	21,176	844	250	32,247
1983	344	487	216	2,312		1,403	17,980	592	1	23,335
1982	379	753	203	1,523		2,186	16,481	342	53	21,920
1981	266	469	204	3,126	-	2,662	25,016	747	562	33,052
1980	717	513	218	1,946	-	3,034	19,239	321	1,272	27,260
1979	488	851	72	848	-	2,652	15,843	511		21,265
1978	1,128	525	95	364	-	1,805	14,279	387	113	18,696
1977	384	519	422	1,941	-	1,991	19,251	424	2,066	27,051
1976	385	987	430	741	-	1,330	17,877	1,482	1,605	24,837
1975	806	2,780	162	4,068	-	6,261	29,298	3,167	9,505	50,853
1974	670	3,221	-	839	-	2,846	5,472	3,563	524	17,135
1973	496	1,657	-	231	-	2,491	1,979	2,922	-	9,776
1972	224	996	293	82	-	2,065	1,532	2,332	585	8,109
1971	456	3,068	176	222	-	5,140	1,929	4,220	630	15,841
1970	1,556	10,015	355	7,021	-	23,739	22,409	14,776	20,768	100,639
1969	1,782	16,628	1,242	4,856	-	20,223	49,594	23,354	3,962	121,641
1968	1,704	14,380	5,411	7,362	-	20,215	35,059	18,335	3,610	106,076
1967	1,352	2,671	5,454	8,130	-	20,722	32,782	22,162	1,258	94,531
1966	1,399	13,042	5,162	6,113	-	17,582	36,479	25,196	11,530	116,603
1965	193	15,254	5,304	5,962	116	11,690	33,174	29,137	17,964	118,794
1964	622	13,511	5,748	6,359	-	22,663	27,654	36,059	5,757	118,373
1963	28	11,160	4,159	5,329	-	15,273	11,390	24,156	3,175	74,670
1962	177	16,656	3,803	8,840	-	22,488	26,500	29,780	-	108,244
1961	188	10,154	4,380	7,625	1,049	5,442	21,974	21,629	65	72,833

TABLE 18: CAPITAL INVESTMENT SUMMARY FOR COMMERCIAL FISHING - IGLOOF DISTRICT, 1985

Water Body	No. of Licences	No. of Man-Months of Fisheries Related Employment	Type and Value of Investment						New Capital Investment		Total \$ Investment
			Craft		Gear		Shore		Type	Value	
			Type	No.	Value	Type	No.	Value			
*Barrel	1	0									
Basket	1	2		2	2500		1829 m	1000			
Bell	1	1		1	900		457 m	340	Gear	280	3500
Paguchi	1	2					2286 m	2500	Boat	500	
Indian	1	4					2286 m	2500	Boat	500	13700
Lake-of-Bays	1	1		2	9000		2286 m	2000	Gear	700	13700
*mameigwess	1	4									11700
Sowden	1	2		1	2500		3658 m	2500	Gear	1075	
Sturgeon	1	3		2	16000		3658 m	4000			16325

* Information taken from 1984 - No licence issued in 1985.

TABLE 19: PRIVATE PONDS -- IGNACE DISTRICT

<u>Name</u>	<u>Location</u>	<u>Water Area (ha)</u>	<u>Species Present</u>
Bryan, E.D.	Due south of HM111, east side old HWY 17 Cathcart Township, Lat 49°17' Long 91°17'	2 ponds = 0.405 ha	Bait fish (commercial purposes)
Gernat, V.	Former MTC pit 912, Corman Township, Lat 49°16' Long 91°15'	2 ponds = 0.405 ha	Bait fish (commercial purposes)

TABLE 20: SUMMARY OF CREEEL SURVEYS SHOWING WATERBODY CREEEL, ANGLER USE, HARVEST, AND CATCH PER UNIT EFFORT - TORRANCE CREEEL

Estimated Harvest and Success by Species

Year	Census Period	Waterbody Creeled	Estimated		Angler Pressure Hours	Days	Lake Trout		Walleye		Northern Pike	
			no. of Anglers	no. of Anglers			kg	CUE No./Hour kg/Hour	Average Weight	Number Caught	kg	CUE No./Hour kg/Hour
1974	Jan - April	Little Raleigh	336	506.7	336		152.4	.83 .30 100% Total Catch	0.95			
	Jan - March	Raleigh	102	136.5	80		50.8	.61 .37 0.64				
	June - August		652	1,718.0	676		419.0	.37 .24 100% Total Catch	0.62			
	June -	Mameigwass	477	2,140.6	151		130.1	.20 .28 91% Total Catch	1.39	42	118.83	.02 .06 9% Total Catch
1975	Year	Sturgeon	2,451	10,104.9	2,265	272.9	4,192.6	.22 83% Total Catch	1.86		No Information	No Information
1977	Winter	Sturgeon	84(1)		103		158.3	100% Total Catch			No Information	No Information
1978	June - August	Kukukus	715(1)	2,269				1,400 816 75% Total Catch	.61 .27 0.57	455	569	.20 .25 25% Total Catch
	June - August	Press	599(1)	1,928				631 300 75% Total Catch	.37 .19 0.44	208	364	.11 .19 25% Total Catch
1978	May - August	English River	449(1)	3,398				1,810 .53 77% Total Catch		551		.16 23% Total Catch
1978	May - July	District(2) Lakes North Hwy 599 & 17	6,488	22,194				56% Total Catch				10% Total Catch
1979	May - Sept	Sturgeon	1,704(1)	30,763			6,419.0	.18 .27 72% Total Catch	1.70			.21 .43
1980	May - June	Sturgeon	1,348	19,384	6,009		3,279.0	.31 .24 68% Total Catch	0.55	1,745	2,908	.09 .15

NOTE: Census periods are inclusive i.e. Jan - April means beginning of January to end of April

1 - Harvest figures are number sampled; estimates not available or impossible to estimate.

- Survived lakes accessed by Hwy. 599, thus south part of district not included.

TABLE 21: SUMMARY OF PROVINCIAL ANGLER SURVEYS, IGNAPE DISTRICT, 1970 and 1985

Year	Angler Origin	Number of Anglers	Origin of Anglers (%)	Estimated No. of Angler Days/Year	NUMBER (KG)2 OF SPORT FISH HARVESTED BY SPECIES					
					Lake Trout		Northern Pike		Walleye	
					Caught	Kept	Caught	Kept	Caught	Kept
1970	Ontario Residents	-	45	42,000 ³	-	-	-	-	-	-
	Non-Residents	-	55	75,000 ³	-	-	-	-	-	-
1980	Ontario Residents	6,000	27	59,000	20,000	20,000	26,000	5,000	162,000	143,000
	Non-Residents	16,500	73	111,000	(17,200)	(17,200)	(41,080)	(7,900)	(116,640)	(102,960)
					24,000	20,000	259,000	85,000	433,000	219,000
					(20,640)	(17,200)	(4098,220)	(134,300)	(311,760)	(157,680)

1 - Information from Cox and Straight (1970) and Clifford (1982)

2 - kg sport fish derived by multiplying number of fish by average weights from district creel surveys

3 - Derived from angling distribution map, Cox and Straight (1970) p.12

TABLE 22: COMPARISON OF POTENTIAL YIELD													
Watershed	Lake Name	Lake Type	COMMERCIAL FISHERY INFORMATION				SPORT FISHERY INFORMATION				Potential Yield by Species (kg)		
			Year	Species	Harvest (kg)	Year	Season	Duration (months)	Species	Estimated Harvest (kg)	Yield by Species (kg)	Total Potential Yield	Over Exploited
Press	Warmwater		1970(1)	Northern Pike	258.7	1978	Summer	3	Northern Pike	364.0	2,420.1 (1,699.0)	10,745.2 (7,551.2)	No
				Lake Whitefish	321.0						2,323.3 (1,623.5)		
				Walleye	823.0				Walleye	360.0 (2,189.9)	3,097.7 (2,189.9)		
Shikag	Warmwater		1976(1)	Northern Pike	409.0						4,271.8	18,966.9	No
				Lake Whitefish	446.3						4,101.0		
				Walleye	1,102.7						5,467.0		
Sowden	Warmwater		1981(3)	Northern Pike	27.2	1981	Summer	5	Nothern Pike	780.0			
				Lake Whitefish	929.9								
				Walleye	25.0				Walleye	2,104.0			
Victoria	Coldwater		1985(1)	Northern Pike	27.7						2,314.8	9,259.3	No
				Lake Whitefish	841.3						2,222.2		
				Walleye	53.0						2,963.3		
Wintering	Warmwater					1981	Summer		Lake Trout	555.0	444.8	2,117.4	Yes
									Northern Pike	115.0	444.8		
50A05	Indian	Coldwater/ Warmwater	1980(1)	Northern Pike	275.8						1,319.6	5,278.3	No
				Lake Whitefish	581.4						1,266.8		
				Walleye	147.3						1,689.1		
Paguchi	Coldwater		1985(1)	Lake Trout	42.3						769.4	9,755.9	Yes
				Lake Whitefish	3,176.0						1,926.5		
				Northern Pike	1.0						2,002.8		
50A05	Indian	Coldwater/ Warmwater		Walleye	85.0						2,615.5		
Paguchi	Coldwater		1985(1)	Lake Trout	27.7						922.1	6,877.5	Yes Possibly
				Northern Pike	3.7						1,719.4		
				Lake Whitefish	1,585.7						1,650.6		

Watershed	Lake Name	Lake Type	COMMERCIAL FISHERY INFORMATION				SPORT FISHERY INFORMATION				Potential Total				Direct Over
			Year	Species	Harvest (kg)	Year	Season	Duration (months)	Species	Estimated Harvest (kg)	Yield by Species (kg)	Lodges	Outpost Camps	Road Access	
5QA06	Mameigwess	Coldwater	1984(1)	Lake Trout	51.7	1974	Summer	3	Lake Trout	597.0	2,274.6	1	0	Yes	Yes
				Northern Pike	265.3						2,274.6				
				Lake Whitefish	4,128.7						2,166.3				
				Walleye	47.0						2,924.5				
5QA09	Cecil	Coldwater	1985(1)	Lake Trout	50.7	1981	Summer	5	Lake Trout	926.0	1,147.0	0	0	Yes	Possibly
				Northern Pike	137.0						1,147.0				
				Lake Whitefish	355.0						2,014.7				
				Walleye	90.3						2,578.9				
Lake-of-Bays	Coldwater	Coldwater	1985(1)	Lake Trout	18.0						2,814.8	0	0	Yes	No
				Northern Pike	21.0						(1,572.3)				
				Lake Whitefish	271.3						2,814.8				
				Walleye	0.0						(2,023.3)				
Penassi	Warmwater	Warmwater	1971(1)	Northern Pike	198.0						951.3	0	0	Yes	No
				Lake Whitefish	580.7						913.2				
				Walleye	81.7						1,217.6				
Sturgeon	Coldwater	Coldwater	1975(3)	Lake Trout	112.5	1975	Year	12	Lake Trout		4,193.0				
				Lake Trout	31.8						6,419.0				
				Lake Trout	99.8						3,279.0				
				Northern Pike	235.9						2,908.0				
1981(3)	Lake Trout	Lake Trout	1981	Walleye	31.8	1981	Winter	1	lake Trout	5,039.0					
				Lake Trout	133.8					167.0					
				Lake Trout	306.3						10,031.6				
				Northern Pike	57.0						10,031.6				
1985(1)	Lake Trout	Lake Trout	1985	Lake Whitefish	8,278.7						9,630.3			Yes	Possibly
				Walleye	354.3						12,840.4				

Watershed	Lake Name	Lake Type	COMMERCIAL FISHERY INFORMATION				SPORT FISHERY INFORMATION				Potential Yield by Species (kg)				Total Potential Yield (kg)	Lodges	Outpost Camps	Direct Road Access	Over Exploited Lakes
			Year	Species	Harvest (kg)	Year	Season	Duration (months)	Species	Estimated Harvest (kg)	Yield by Species (kg)	Yield by Species (kg)							
4QD01	Little Raleigh Coldwater					1974	Winter	4	Lake Trout	152.0	41.9	167.5	0	0	0	No	Yes		
	Raleigh Coldwater					1974	Winter Summer	6	Lake Trout	448.0	734.8	2,939.1	2	0	0	Yes	No		

1 - Average of most recent three years commercially fished (year listed is most recent year information available).
2 - Boundary lakes. Productivity figures are for entire lake. Bracketed figures are productivity values for Ignace District Portion of the lake.
3 - Two lakes (Sowden and Sturgeon) have individual year commercial fishing information included as these years are the same as those in which a creel census was done.
This makes a direct comparison easier between commercial and sport fishing activity on these lakes.

BOAT CACHE LAKES

Abamategwia	2	Doreen	1
Agimac	11	Downhill	2
Allanwater	9	Dugan	1
Amik	2	Dunne	1
Anderson	1	Dye	2
Anizev	1	Eady	3
Arethusa	13	East Campus	1
Armit	2	East Moosehide	1
Arnason	3	Edwards	1
Balmoral	5	Elephant	4
Barnard	4	Elva	3
Barrel	1	Emerald	1
Basket	6	Empress	2
Beak	4	Encamp	1
Beavero	1	English River	15
Beckington	2	English River, Talking Falls	7
Bell	4	Fish	1
Belmont	1	Flatrock	2
Bending	13	Flint	1
Bending Creek	2	Flying Loon	1
Between McEwen & Snowshoe	1	Fourbay	3
Between Turtle R. & Smirch	1	Furniss	1
Big Indian	3	Gamble	1
Blackbird	1	Gary	1
Brightsand R.	1	Gibraltar	1
Bush	1	Glitter	5
Butler	1	Gooch	2
Byline	1	Goodman	1
Campus	3	Granite	3
Cannon	1	Grayson	3
Cecil	1	Graystone	17
Cafael	1	Greenheart	2
Chain (Sandbar)	2	Gulliver	2
Chew Chew	1	Gulliver R.	2
Claw	1	Gustavson	1
Cobb	1	Hand	1
Cottle	1	Handcuff	6
Couture	2	Handford	1
Cox	2	Harmon	3
Dam	1	Harry	1
Dasent	4	Hawk	2
Davies	3	Heathwalt	1
Dawson	3	Hex	1
Deerhide	1	Hilltop	4
Dewan	1	Honey Hole #3	1
Dibble	4	Hook	3
Dimple	2	Hump	1
Dimple/Patricia Portage	1	Indian	5
Discovery	4	Islet	2
Divided	2	Jac Saga	2
Dizzy	1	Jarick	2
Dobie	2	Kashagagoma	2
Dollar	4	Kawaweogama	15
Dome	1	Kay	1

Keikewabik	2	Penassi	3
Kenoshay	3	Phyllis	2
Kinmoapiku	6	Pickere1 Arm	1
Kintock	1	Pickere1/Conant	2
Kukukus	19	Poach	1
Kukukus/Godden	2	Polecat	1
Lake of Bays	2	Portage Between Smirch & Dibble	4
Lake St. Joe	2	Post	1
Lard	2	Pothole W. of Middle Bay	1
Lawson	1	Press	6
Little Assin	1	Princess	1
Little Basket	1	PUnt	1
Little Butler	1	Queer	2
Little Indian	3	Quest	4
Little Joe	1	Raleigh	9
Little Mennin	3	Raven	10
Little Mennin	3	Revell	8
Little Nora	1	Richan	1
Little Raleigh	5	Robinson	3
Loggers	1	Rocker	1
Lower Beak	3	Round	1
Lower Moosehide	2	Roundhead	1
Mameigwess	1	Running Deer	1
McIver	1	Ruxton	3
McKee	1	Sally	2
McNamara	3	Sandbar	24
Meighen	4	Sanster	1
Megikons	2	Sassanatch	1
Mennin River	1	Saturn	1
Metionga	3	Savoy	1
Minnow	1	Scotch	1
Minnow Lake N. of Bending	1	Seiss	3
Minnow Lake NW of Middle Bay	1	Seseganaga	55
Moberley	6	Sesenach	2
Mud & Hook	7	Shanty	3
Mud & Sally	2	Shaw	2
N. of Little Mennin	2	Shikag	35
Namaygoos	2	Shikag Islands	3
Namaygoos/Kinmoapiku Portage	1	Shiny	1
Nelson	1	Shoehorn	3
No Name	3	Silver Dollar	2
No Name, 1/2 m. NW of Bending	1	Six Mile	6
No Name, 1/4 m. W. of Bending	1	Small Lake, E. arm of Pipio	1
Nora	15	Small Lake off Sowden	1
Notman	1	Small Lake, South of Paddy	1
O'Grady	1	Smirch	4
Oakley	1	Snake Bay	1
Ouillette	1	Sorochuk	1
Oval	5	Sowden	17
Owl	1	Spawn (Osprey)	2
Paddy	4	Spider	4
Paddy/Smirch Portage	2	Spook	1
Paguchi	7	Square	3
Pant	1	Squaw	4
Parenteau	1	Stavert	1
Paris	2	St. Raphael	4

String Bean	1
Sturgeon	65
Sturgeon River	4
Suzanne	5
Swamp	1
Swanzy	1
Swimit	1
Talman	3
Tannon Portage	1
Teapot	1
Teddy Bear	2
Telephone	1
Ten Mile	5
Three Mile	2
Trimble	1
Turtle R.	3
Unaka	1
Uneven	3
Upper Beak	4
Valjean	1
Valora	1
Vanessa	5
Victoria	4
Vista	17
Wabigoon	7
Waldrif	1
Walleye	1
Wanda	1
Wapikamanski	8
Watikimi	3
Watcomb	1
Wellington	2
West Hawk	1
West Moosehide	2
West of Cox	1
White Otter	1
Wilgress	2
Wilkie	3
Willet	1
Willow Narrows	1
Wintering	7
Wintering/Bear	1
Young	9
Zarn	5

Minnow Blocks	16
Trapline IG 15	1
IG 16	3
IG 32	6
IG 34	5
IG 35 & 36	5
IG 5	1
IG 54	10
IG 53	1

GLOSSARY

Allowable Yield

The yield by species as a result of partitioning the potential yield. The sum of the allowable yields by species will not necessarily add up to the potential yield.

Angler-day

While it is usually accepted that any amount of effort in a day constitutes one angler-day, for the purposes of converting angler hours to angler-days, 4 hours will be used.

Aquatic Habitat Inventory

A basic study of a lake to determine species present, water chemistry, depth, water volume and other characteristics. The information obtained can be used to determine the potential and allowable yields of the lake.

Areas of Concern

Areas requiring particular management prescriptions in order to maintain or improve resource values such as fish and wildlife habitat, forest genetic resources, scenic areas and other recreational and tourism values.

Baitfish

Any fish that are legally harvested by the commercial baitfish industry.

Coldwater Lakes

Those lakes having characteristics which would support Salmonids.

Coldwater Streams

those streams having characteristics which would support Salmonids.

Commercial Fish

Any fish that are legally harvested by the commercial fishing industry.

Creel Survey

A survey of anglers to determine angler origin, species of fish caught, weights of fish and number of hours fished. Other information such as gear being used and information on the age of fish may also be collected.

Critical Fish Habitat

Any fish habitat required for the maintenance of a healthy fish population or otherwise identified as essential to the achievement of the Ministry's fishery program objectives.

Crownland Recreation Program

An initiative implemented in 1984 within the Northwestern Administrative Region. The intent of this initiative was to encourage non-Ontario based non-residents to use existing tourist facilities and thereby contribute to local and provincial economies through use of Ontario's fishery resources and to generate revenue from non-resident use of crown land. In addition, this program involves the designation of areas closed to non-resident camping to redistribute use from sensitive fisheries.

Goal

A general purpose to which the ministry aspires.

Harvest

Fish taken and kept by resource users.

Management

The judicious use of means to achieve ends. Management may have various levels of intensity. For example, if a high degree of technology is used, or if very careful tending is given, the management is high level.

Non-Resident

An angler whose principle residence is outside of Ontario.

North or (Northern) Ontario

Northwestern and Northeastern planning regions include the following districts: Dryden, Fort Frances, Ignace, Kenora, Red Lake, Sioux Lookout, Atikokan, Geraldton, Nipigon, Terrace Bay, Thunder Bay, Blind River, Espanola, North Bay, Sault Ste. Marie, Sudbury, Temagami, Wawa, Chapleau, Cochrane, Gogama, Hearst, Kapuskasing, Kirkland Lake, Moosonee, and Timmins.

Objective

A quantifiable and attainable end, which the ministry's efforts are intended to accomplish.

Occasion

A measure of actual recreational use describing the number of times a recreation reserve or facility is used by individuals in a given time period. An occasion is not considered to exceed one day in duration.

Opportunity

A measure of recreation supply which is used to describe the number of times a resource or facility can be used (occasions of use) in a given time period. An opportunity is considered not to be greater than one day.

Outpost

Housekeeping accommodations usually in remote areas with limited access.

Over Harvesting

Harvests of fish by users which exceed the annual allowable yield.

Potential Yield

The amount of fish flesh that can be removed from the water on a sustained basis.

Planning Area

The area for which a planning process is carried out, and for which a resource management plan is prepared.

Policy

The decision concerning the objectives to be achieved and the means of achieving them. For resource management planning, we are mainly concerned with the objectives, targets, strategies and tactics.

Resident

An angler whose principle residence is in Ontario. A local resident would be one who can fish an area on a day use basis, i.e. travel to the area, fish, and return home on the same day.

South or (Southern) Ontario

The southern planning region includes the following districts: Parry Sound, Bracebridge, Minden, Algonquin Park, Bancroft, Pembroke, Owen Sound, Wingham, Chatham, Simcoe, Aylmer, Huronia, Lindsay, Maple, Cambridge, Niagara, Tweed, Napanee, Carlton Place, Brockville and Cornwall.

Sportfish

Any fish that are legally caught by angling.

Strategy

Planned actions or measures to achieve a desired end.

Resource Management

The wise use of a particular resource, such as fish, to achieve a specific end.

Tactic

A method devised to achieve one or more strategies.

Target

A quantified end to be achieved or completed by a specific date.

Underproducing Waters

Waters from which the production is constrained because of stresses such as water quality, species composition, over harvest, undesirable species.

Warmwater Lakes

those lakes other than coldwater lakes.

Warmwater Streams

Those streams other than coldwater streams.

District and Regional Setting

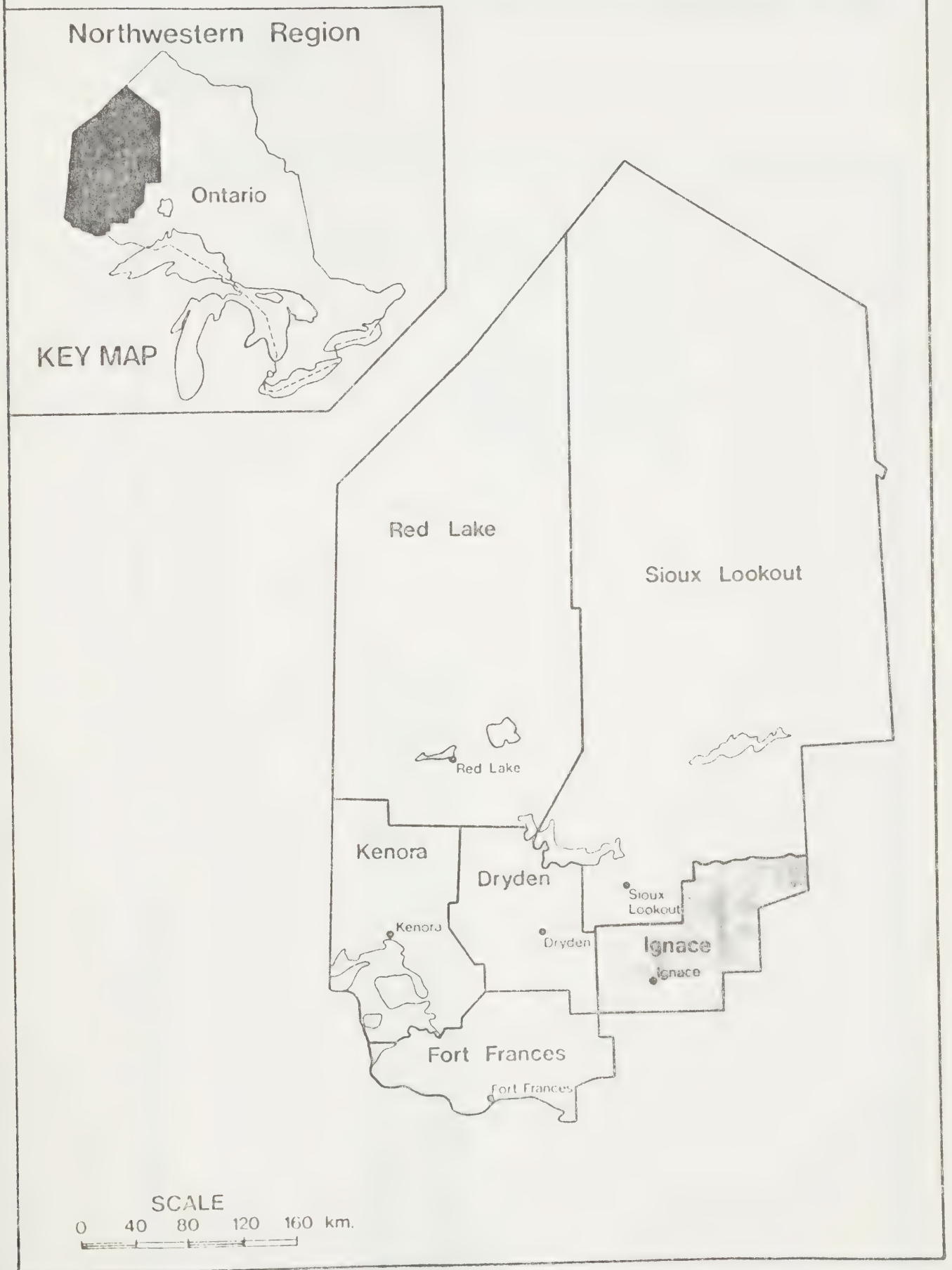


FIGURE 1

IGNACE DISTRICT

LEGEND



LAKES KNOWN TO CONTAIN

LAKE TROUT

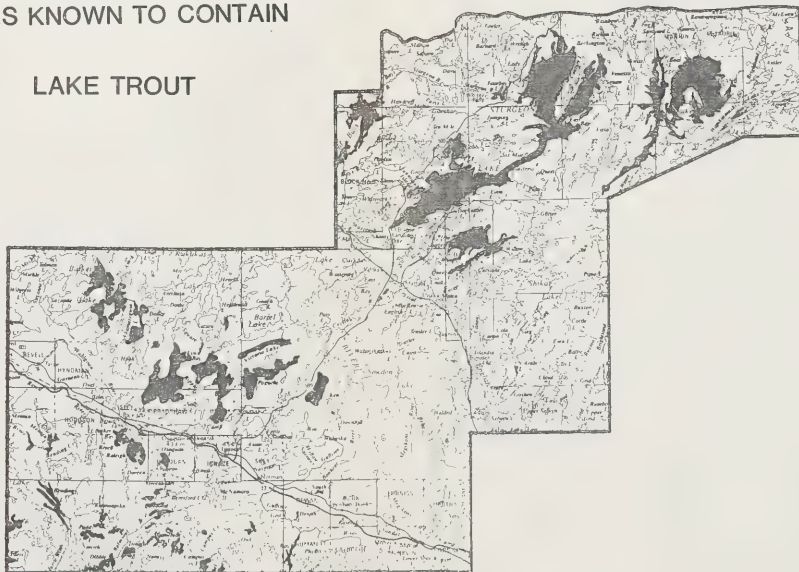
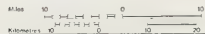


FIGURE 2

IGNACE DISTRICT

LEGEND



LAKES KNOWN TO CONTAIN WALLEYE

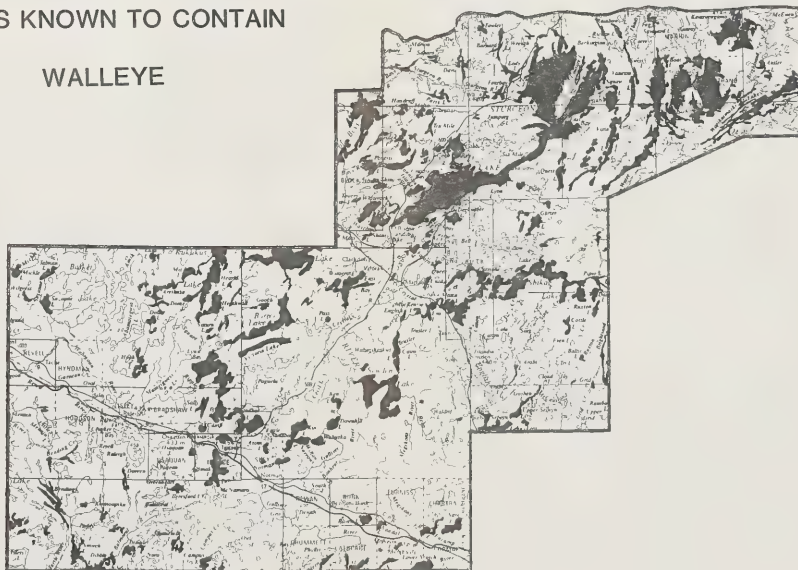
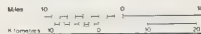


FIGURE 3

IGNACE DISTRICT

LEGEND



LAKES KNOWN TO CONTAIN NORTHERN PIKE

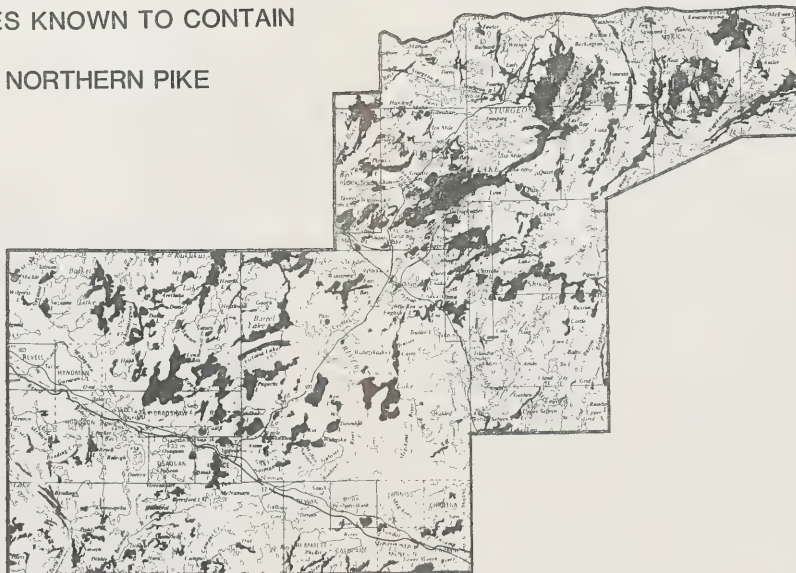


FIGURE 4

IGNACE DISTRICT

LEGEND

Miles 10

0 10 20

Kilometers 0 10 20



LAKES KNOWN TO CONTAIN SMALLMOUTH BASS

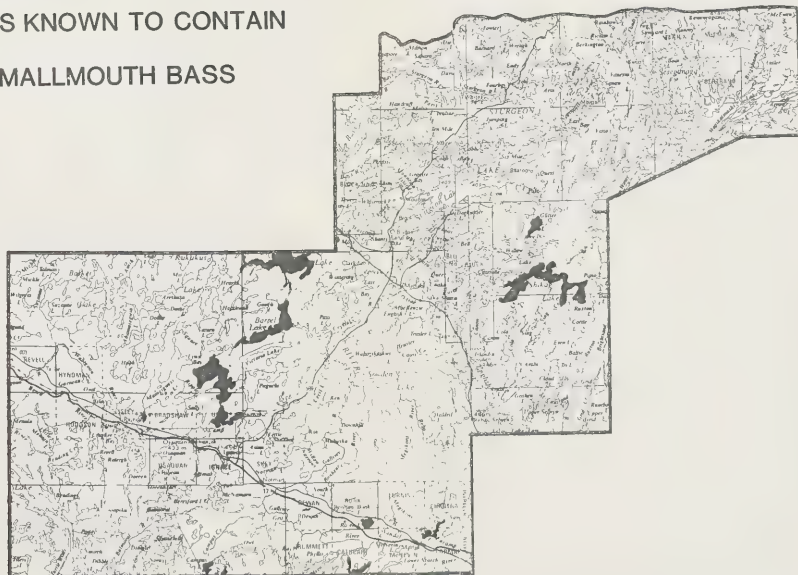


FIGURE 5

AN

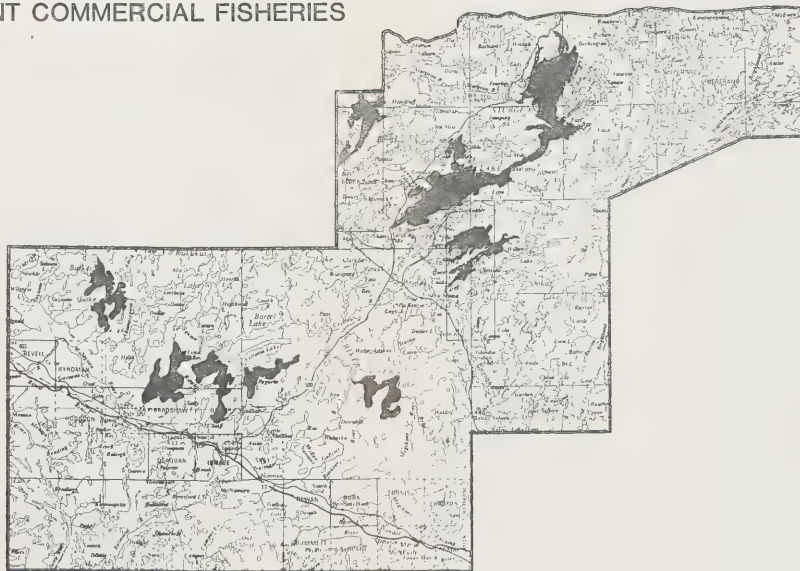


FIGURE 6

IGNACE DISTRICT

LEGEND

Miles

10

0

10

20

30

40

50

60

70

80

90

100

110

120

130

140

150

160

170

180

190

200

210

220

230

240

250

260

270

280

290

300

310

320

330

340

350

360

370

380

390

400

410

420

430

440

450

460

470

480

490

500

510

520

530

540

550

560

570

580

590

600

610

620

630

640

650

660

670

680

690

700

710

720

730

740

750

760

770

780

790

800

810

820

830

840

850

860



LAKEs KNOWN TO CONTAIN WHITEFISH

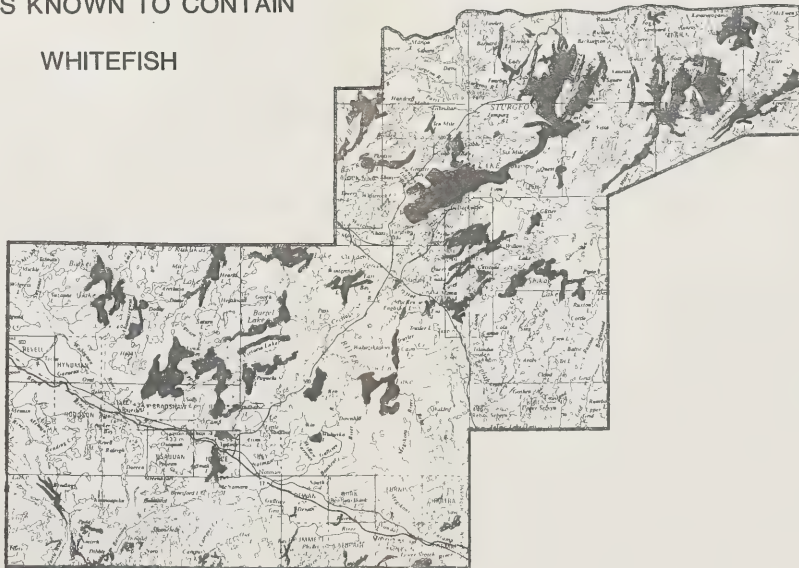


FIGURE 7

LEGEND



BAIT FISH BLOCKS

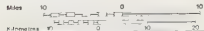
The map displays a grid of bait fish blocks, numbered from 492901 to 499904. The blocks are arranged in a grid that follows the coastline of the Chesapeake Bay. The numbers are printed in a bold, black font, and the blocks are separated by thin black lines. The map includes various geographical features, such as the Potomac River, Annapolis, and various islands and bays. The blocks are numbered in a grid pattern, with some blocks missing or partially obscured by the map's irregular shape.

Block Number	Block Number	Block Number	Block Number	Block Number	Block Number
492901	492902	492903	492904	492905	492906
492907	492908	492909	492910	492911	492912
492913	492914	492915	492916	492917	492918
492919	492920	492921	492922	492923	492924
492925	492926	492927	492928	492929	492930
492931	492932	492933	492934	492935	492936
492937	492938	492939	492940	492941	492942
492943	492944	492945	492946	492947	492948
492949	492950	492951	492952	492953	492954
492955	492956	492957	492958	492959	492960
492961	492962	492963	492964	492965	492966
492967	492968	492969	492970	492971	492972
492973	492974	492975	492976	492977	492978
492979	492980	492981	492982	492983	492984
492985	492986	492987	492988	492989	492990
492991	492992	492993	492994	492995	492996
492997	492998	492999	493000	493001	493002
493003	493004	493005	493006	493007	493008
493009	493010	493011	493012	493013	493014
493015	493016	493017	493018	493019	493020
493021	493022	493023	493024	493025	493026
493027	493028	493029	493030	493031	493032
493033	493034	493035	493036	493037	493038
493039	493040	493041	493042	493043	493044
493045	493046	493047	493048	493049	493050
493051	493052	493053	493054	493055	493056
493057	493058	493059	493060	493061	493062
493063	493064	493065	493066	493067	493068
493069	493070	493071	493072	493073	493074
493075	493076	493077	493078	493079	493080
493081	493082	493083	493084	493085	493086
493087	493088	493089	493090	493091	493092
493093	493094	493095	493096	493097	493098
493099	493100	493101	493102	493103	493104
493105	493106	493107	493108	493109	493110
493111	493112	493113	493114	493115	493116
493117	493118	493119	493120	493121	493122
493123	493124	493125	493126	493127	493128
493129	493130	493131	493132	493133	493134
493135	493136	493137	493138	493139	493140
493141	493142	493143	493144	493145	493146
493147	493148	493149	493150	493151	493152
493153	493154	493155	493156	493157	493158
493159	493160	493161	493162	493163	493164
493165	493166	493167	493168	493169	493170
493171	493172	493173	493174	493175	493176
493177	493178	493179	493180	493181	493182
493183	493184	493185	493186	493187	493188
493					

FIGURE 8

IGNACE DISTRICT

LEGEND



COMMERCIAL TOURIST OPERATIONS

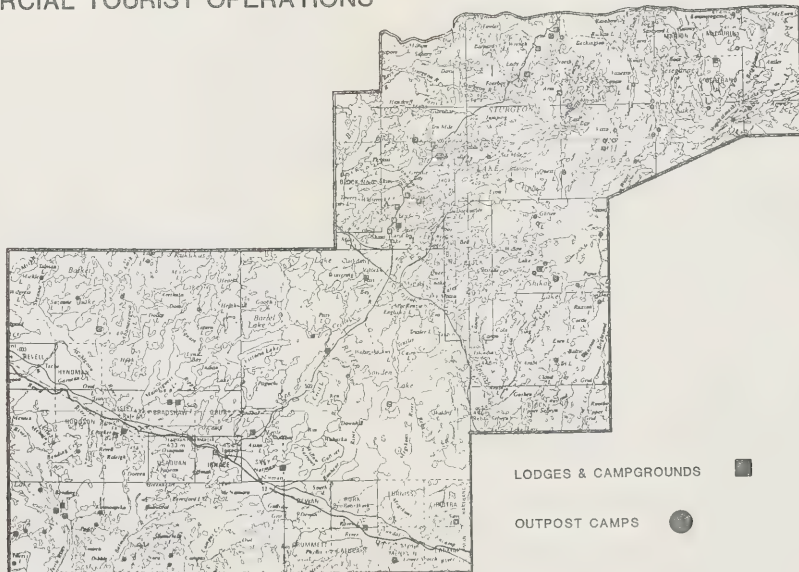


FIGURE 9

IGNACE DISTRICT

LEGEND

Miles 10 20

Kilometers 10 20



DIP NET FISHERIES

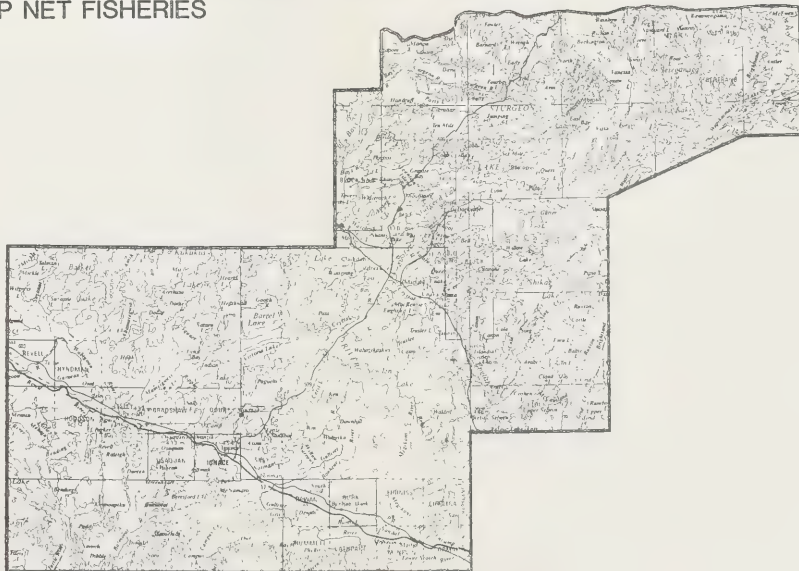
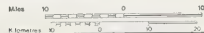


FIGURE 10

IGNACE DISTRICT

LEGEND



ROAD NETWORK AND AIRPORTS

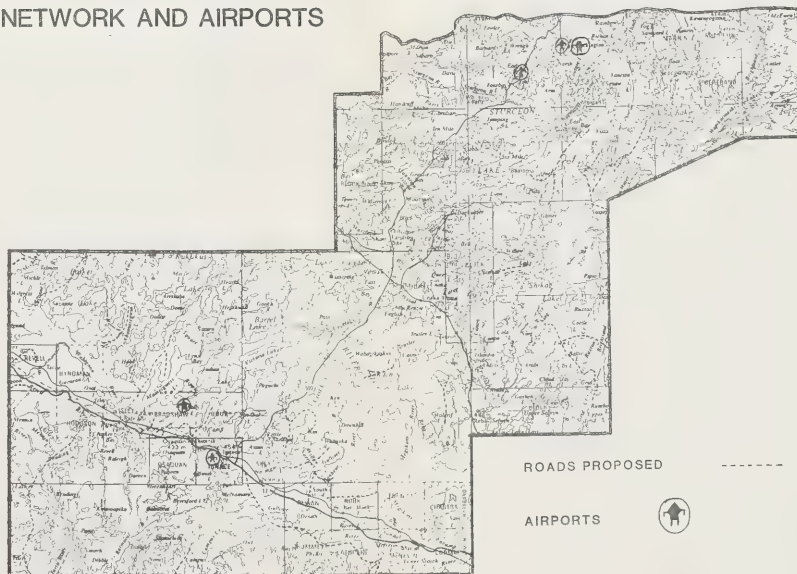


FIGURE 11

LEGEND

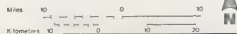
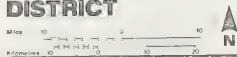


FIGURE 12

IGNACE DISTRICT

LEGEND



KNOWN COLDWATER LAKES

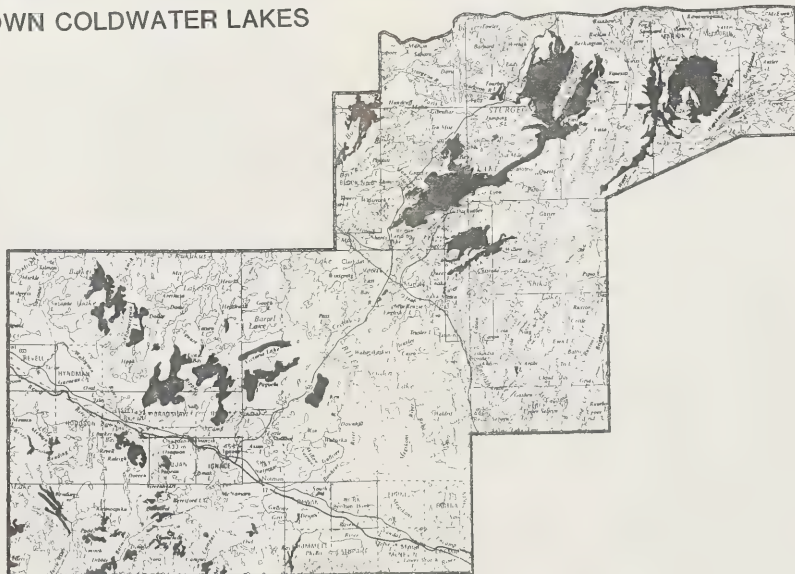


FIGURE 13

A

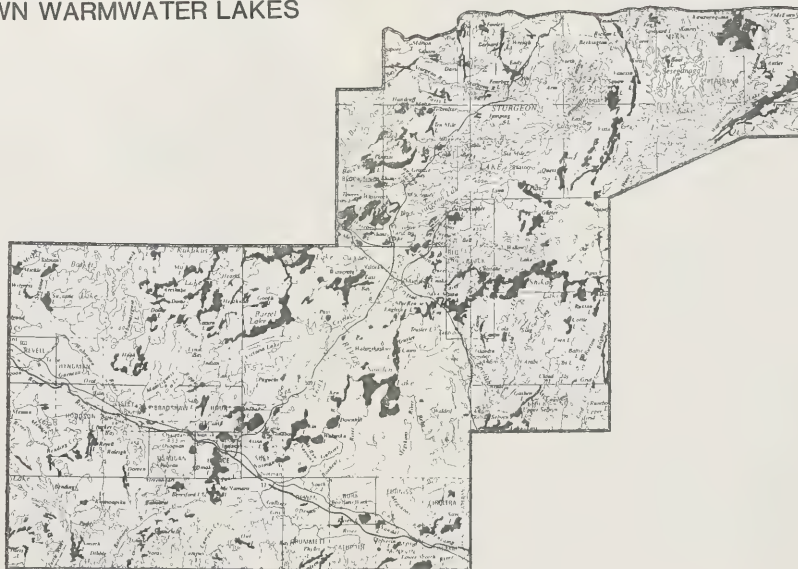
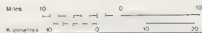


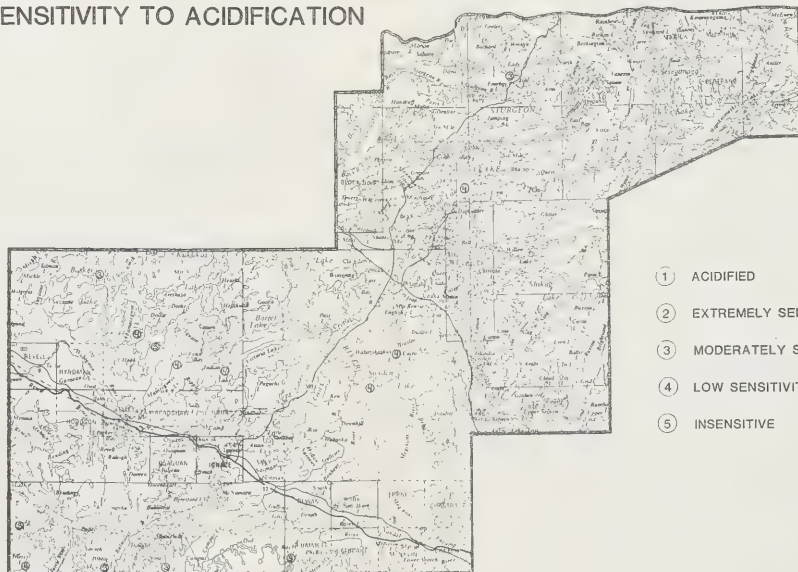
FIGURE 14

IGNACE DISTRICT

LEGEND



LAKE SENSITIVITY TO ACIDIFICATION

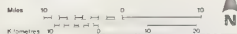


- ① ACIDIFIED
- ② EXTREMELY SENSITIVE
- ③ MODERATELY SENSITIVE
- ④ LOW SENSITIVITY
- ⑤ INSENSITIVE

FIGURE 15

IGNACE DISTRICT

LEGEND



AREAS OF RESTRICTED FISHERIES

RESOURCE USER

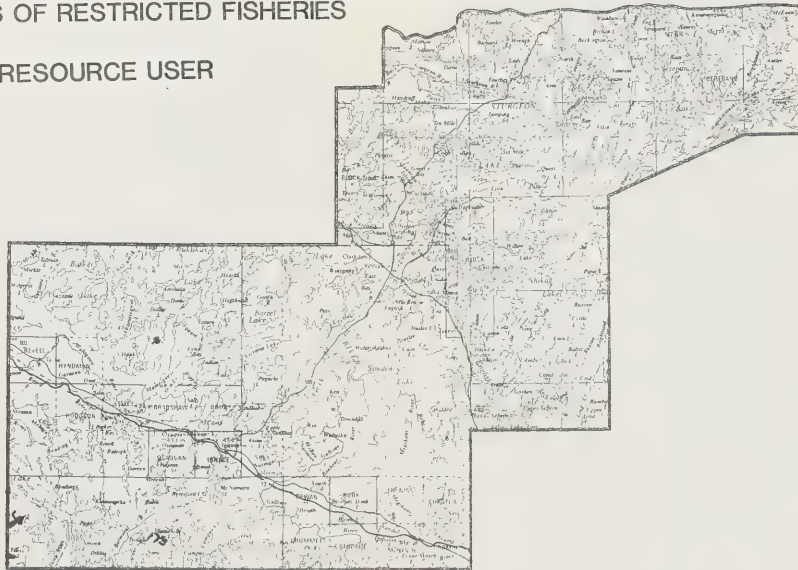


FIGURE 16

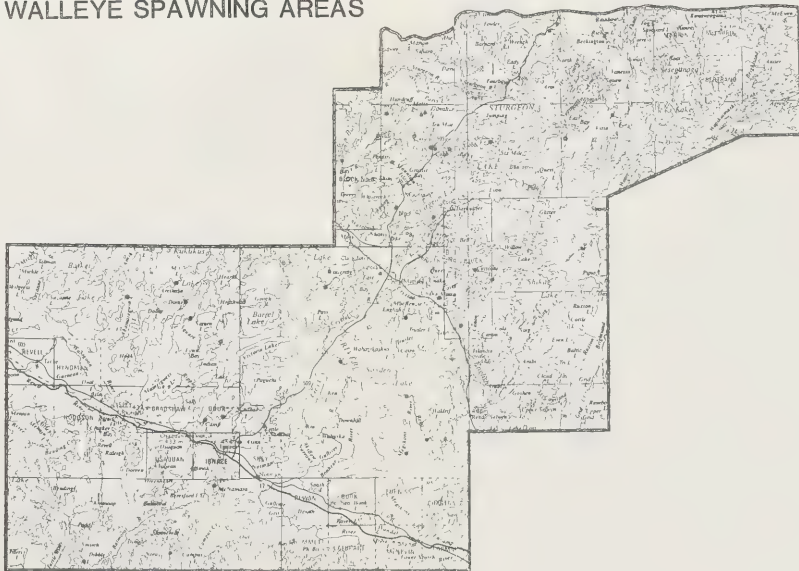
A
N

FIGURE 17

IGNACE DISTRICT

LEGEND



KNOWN NORTHERN PIKE SPAWNING AREAS

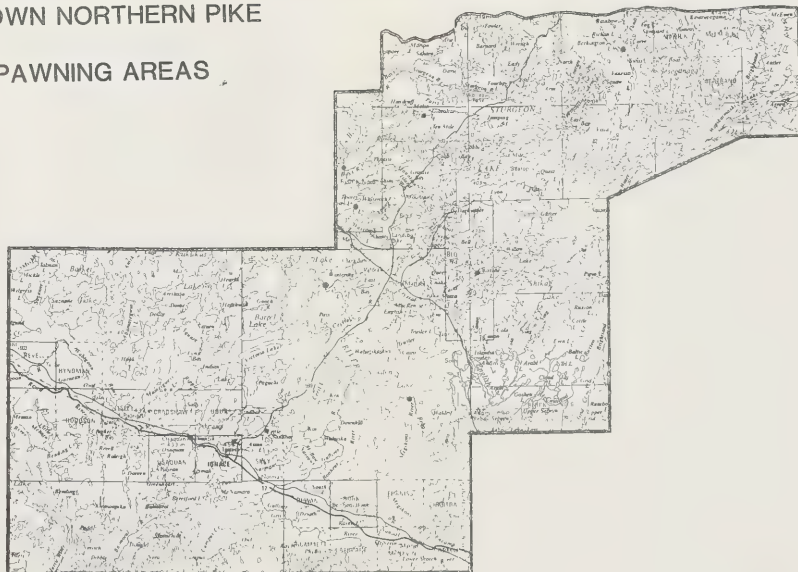


FIGURE 18

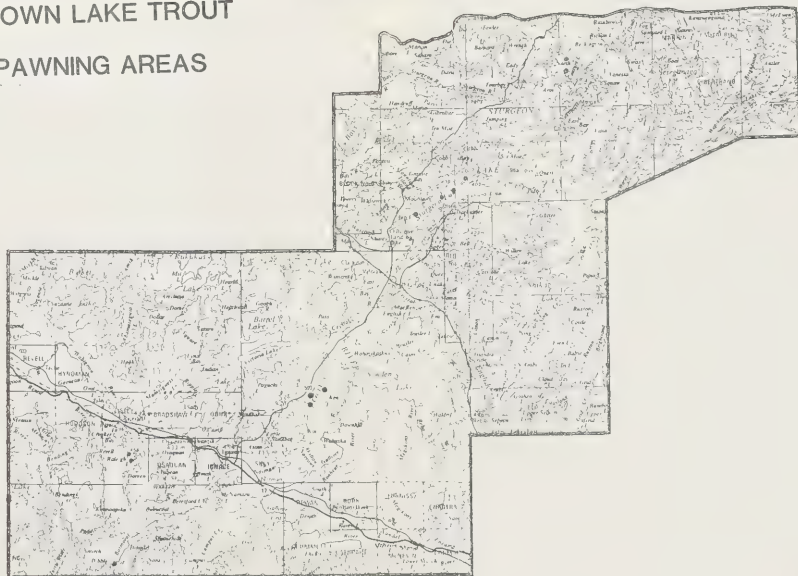
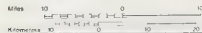


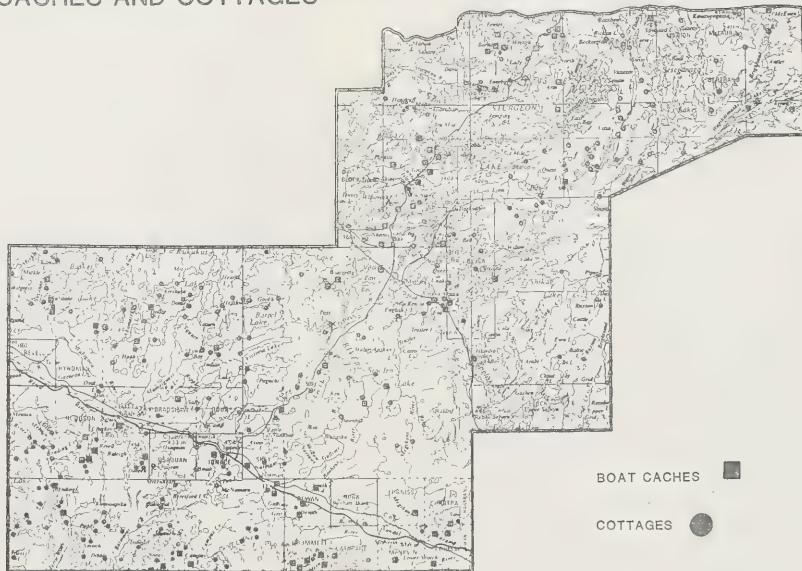
FIGURE 19

IGNACE DISTRICT

LEGEND



BOAT CACHES AND COTTAGES



BOAT CACHES



COTTAGES



FIGURE 20

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